American MILK REVIEW

AMERICAN MILK REVIEW BUTTER REVIEW EGG & POULTRY REVIEW

AN URNER-BARRY PUBLICATION

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UNION PACIFIC'S SUN VALLEY — A BOTTLE OF MILK ON EVERY TABLE

NUMBER 2

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The bowls of the new De Laval 200 Series machines retain all of the design features that for years have made "Air-Tight" Separators the standard of the industry. Under proper operating conditions, these machines can be expected to skim to one hundredth of one per cent (.01%) or less by Babcock.

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American Milk Review — February, 1949. Published monthly by Urner-Barry Company at 92 Warren Street, New York. Domestic subscription $3.00 per year; foreign $3.50 per year. Acceptance under the act of June 5, 1924, authorized May 14,1948.

American MILK REVIEW

VOLUME 11 - - FEBRUARY 1949 - - NUMBER 2

CONTENTS

	Page
The Truth About Profits *By Dr. Leland Spencer*	2
Iowa Champions *By Norman Myrick*	8
Milk Goes to Sun Valley *By Norman Myrick*	12
Editorially Speaking	16
Producing Quality Cream *By E. M. Barker*	21
Employee Suggestion Systems *By Ernest A. Dench*	26
Milk Cans and Hard Water	30
A Letter to the Editor *By A. A. Brown*	34
Portrait of A Dairyman *By John Burnham*	36
Synthetic Detergents *By Dr. Donald Price*	38
Problems of The Industry *By R. F. Holland and J. C. White*	46
The Correspondents Report	48
Cut Those Storage Losses *By Ernest W. Fair*	52
V. A. Standards and Specifications	54
Emergency Source of Power *By B. F. Cargill and J. R. Schram*	58
Maintenance Talk	64
North of Forty-nine	66
Using Our Separator	72
Wants and For Sales	74
Index to Advertisers	76

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Domestic subscription ..... $3.00 per year
Foreign subscription ..... $3.50 per year

MEMBER
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PUBLISHED MONTHLY BY THE URNER-BARRY COMPANY

92 Warren Street . . . . New York 7, N. Y.

President, Harold E. Taber; Vice President, John C. Taber; 2nd Vice President, Guy W. Whitcomb; Treasurer, Paul H. Taber; Secretary, Ray H. Taber. Address of the officers and publication are the same.

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XUM

HOW CAN MILK PRICES BE REDUCED?
WHAT HAPPENS TO THE SPREAD?
WHAT IS THE PROFIT ON A QUART OF MILK?

YOU'LL FIND THE ANSWERS IN—
THE TRUTH ABOUT PROFITS

By **LELAND SPENCER**
Cornell University

DURING THE SEVEN YEARS 1941-1947, the average yearly sales of six of the principal companies distributing milk in the New York-New Jersey Metropolitan Area were approximately 168 million dollars. From one dollar of income from sales, these companies paid 57.6 cents for milk, cream and other products purchased, leaving a gross spread of 42.4 cents. All expenses of doing business took 40.1 cents of the sales dollar leaving a balance of 2.3 cents before paying federal and state taxes on income. These taxes amounted to 1.3 cents, and there remained a net profit or net earnings of 1.0 cent per dollar of sales.

Expenses incurred for selling and delivering products to consumers and other customers absorbed nearly 21 cents of the average sales dollar and made up about half the total expenses of operating the business. Receiving, processing and transportation expenses constituted one-third of the total expense and amounted to 13.4 cents per dollar of sales.

Variations Between Companies

Of lesser importance were the expenses for bottles and containers (4.1 cents per dollar of sales) and administrative and other expenses (1.7 cents per dollar of sales).

Those who read this report should not assume that the data for each of the six companies followed closely the pattern shown by the combined figures. There was, in fact, a wide range as to practically all items. The average yearly sales of the two largest companies were approximately 15 times those of the two smallest companies. In cents per dollar of sales, product cost ranged from a low of 53 cents to a high of 69 cents. All expenses in cents per dollar of sales were half again as much for the company whose expense ratio was highest as for the company whose expense ratio was lowest. Net earnings or profit per dollar of sales for the two companies having the highest profit ratios were more than five times as great as for the two companies whose profit per dollar of sales was smallest. Four of the six companies had losses in at least one of the seven years covered by the study.

The fact that the two largest companies were so outstanding in volume of sales indicates that the operating ratios shown for the group as a whole do not differ greatly from the averages of such ratios for the two principal companies.

Selling Price, Product Cost, Expense

The quantities of milk, cream, other milk products, and non-milk products such as eggs and orange drink sold by the six leading milk companies during the year ended June 30, 1948 were equivalent to approximately 1081 million quarts or 23 million hundredweight of whole milk. *1/*

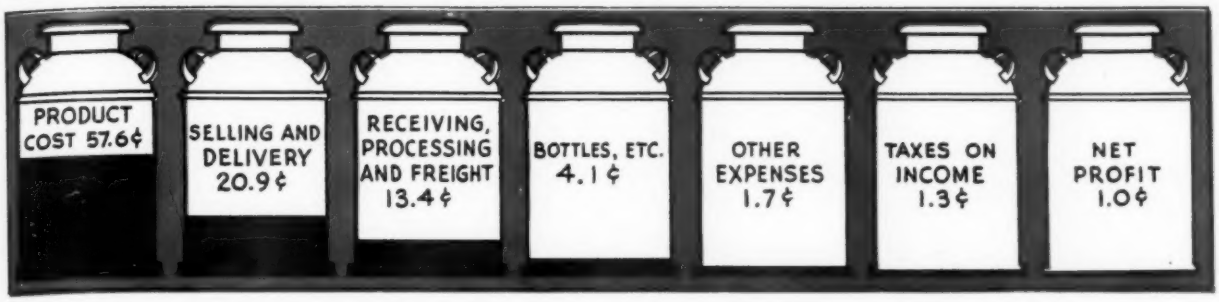
By dividing the number of quarts or the number of hundredweight of milk equivalent of all products sold into the dollar amounts of sales, product cost, expenses and profit, it is possible to determine the average amount of each item per quart or per hundredweight.

It will be observed that the average selling price per quart of milk equivalent, including all products and all methods of sale was approximately 21.9 cents. The product cost averaged 13.2 cents per quart; all expenses 8.2 cents; taxes on income about one-sixth of a cent; and net profit after all taxes one-fourth of a cent.

On a per-hundredweight-of-milk equivalent basis the figures were: selling price $10.17; product cost $6.14; expenses

1/ The method of computing milk equivalent is explained in the Appendix.

THIS IS WHAT HAPPENS TO A DOLLAR IN THE MILK BUSINESS



$3.83; taxes on income $.08; and net profit after all taxes $.12.

The product cost per 100 pounds of milk is fully $1.00 more than the average of minimum class prices that were required to be paid for milk of average butterfat content during the same period by handlers who were subject to the federal order applicable to the New York Metropolitan Milk Marketing Area. The excess of the six companies' product cost over the average of minimum class prices is due in part to the payment of various premiums and differentials, and to the fact that fluid milk sales made up a high percentage of the total sales of these companies.

Computing Milk Equivalent

The method that was used in computing the milk equivalent of sales also tended to raise the product cost per unit above the average of minimum class prices. In the first place the physical volume of sales is less than the physical volume of purchases by the amount of shrinkage and waste, which may be as much as two or three percent. More important than this however, is the fact that quarts of purchased cream and pounds of purchased butter were treated as the equivalent of quarts of whole milk even though the prices paid per unit for these products undoubtedly were about three to five times the average price paid for a quart of milk.

On the other hand, while this method of computing milk equivalent tended to inflate the product cost as well as the selling price per unit, it is believed to give more satisfactory results with respect to unit costs and profits than would be obtained by other possible methods.

The milk companies' profit or earnings per 100 pounds of milk equivalent will be of particular interest to dairy farmers. The question arises at this point as to how the milk companies' profit rate per quart compares with that of farmers. Ordinarily farmers' earnings are not computed in the same way as are industrial earnings, principally because so much of the farm labor is self-employed. However, a useful comparison can be made on the following basis: The profits of the six milk companies during the year ended June 30, 1948, amounted to approximately 5.5 percent of their adjusted net assets. To provide a similar rate of return on the capital invested in New York dairy farms would require earnings of about $.40 to $.50 per 100 pounds of milk sold. The reason for the high farm-capital cost per 100 pounds of milk is the slow rate of turnover. The yearly sales of commercial dairy farms ordinarily do not exceed half the amount of invested capital. On the other hand the average yearly sales of the six leading milk companies whose records were analyzed in this study were about twice the total assets and about 3.5 times the adjusted net assets, exclusive of all good will and all indebtedness.

The prices, expenses, and profit per quart and per hundredweight of milk differed among the individual companies of the group and no doubt varied widely as to different products and different trade outlets. It was beyond the scope of this study to determine the net selling prices, product costs, expenses and profits for various products and methods of distribution. Such determinations would in fact be a tremendous undertaking and would involve many arbitrary allocations of joint costs.

However, attention may well be called to some significant indications with respect to profit rates on different portions of the companies' overall business. Since sales of whole milk constituted about four-fifths of the total sales, it is unlikely that the profit rate on milk differed much from the average rate shown for all products. In general the profit rates on premium grades of milk, homogenized milk, cream and specialty products are higher than the average for all products. Since the average profit rate for all products was only one-fourth of a cent per quart of milk equivalent it seems fairly certain that these companies sold their standard or plain milk at a loss.

It is uncertain whether products manufactured from surplus milk contributed to or detracted from the average rate of profit on all products sold during the year ended June 30, 1948. In view of the sharp decline in prices of such products during the latter half of the year 1948 however, it is highly probable that the ultimate outcome of manufacturing operations conducted by these companies in the spring of 1948 will be a loss.

Changes During the Study

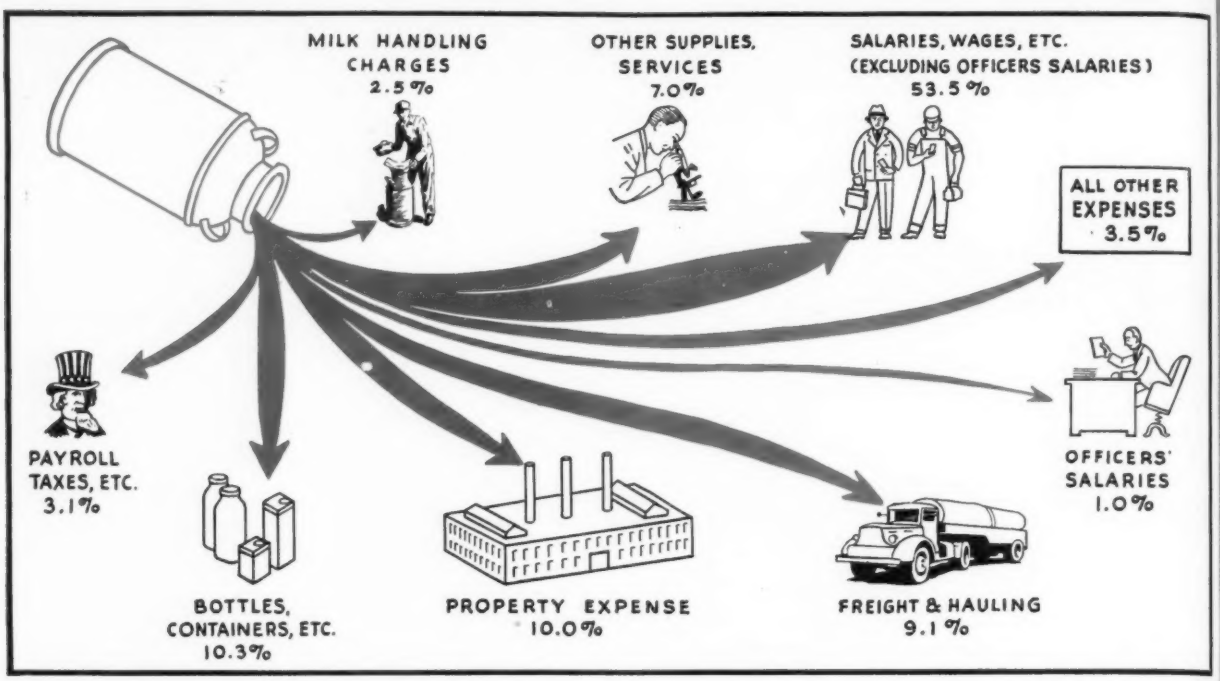
The period covered by this study was marked by strong upward trends in commodity prices and wages and by high levels of business activity and employment. Consumption and sales of fluid milk increased. Cream sales were sharply curtailed by government restrictions during the war but made a partial recovery after the controls were released. Milk production in the area of the New York milk shed was five to six percent greater in 1947 than in 1941, but increased fluid sales, and larger shipments of milk to other markets along the Atlantic Seaboard left a smaller volume of surplus milk for manufacture.

Between 1941 and 1947, the dollar volume of sales of the six companies represented in this study rose about 70 percent. Their product cost increased 88 percent and their expenses of operation 45 percent.

Most of the increase in dollar volume of sales was due to the rise in prices and to the natural increase in volume of sales resulting from growth of population and larger consumption of milk per capita. Retail milk prices in New York City rose about 25 percent between 1941 and 1947, and dealers' selling prices to stores advanced more than 30 percent. Wholesale prices of surplus cream averaged almost 90 percent more in 1947 than in 1941, and wholesale quotations for evaporated milk showed a gain of 66 percent during the same period.

The six-company group remained intact during the period of the study, with only minor changes. One comparatively small operating unit was brought into the group in 1947 and another in 1948 through purchase by certain of the six

THE MONEY FROM THE SPREAD GOES HERE AND HERE AND HERE


MILK HANDLING CHARGES 2.5%
OTHER SUPPLIES, SERVICES 7.0%
SALARIES, WAGES, ETC. (EXCLUDING OFFICERS SALARIES) 53.5%
ALL OTHER EXPENSES 3.5%
PAYROLL TAXES, ETC. 3.1%
OFFICERS' SALARIES 1.0%
BOTTLES, CONTAINERS, ETC. 10.3%
PROPERTY EXPENSE 10.0%
FREIGHT & HAULING 9.1%

companies, but these additions had only a slight effect on the total volume of sales.

The 88 percent increase in product cost between 1941 and 1947 also can be attributed largely to higher prices. The monthly blended prices computed by the New York Market Administrator averaged $2.43 per cwt. in 1941 and $4.45 per cwt. in 1947. The price advance was 83 percent. Back of this upward surge in the prices paid for milk lie similar advances in feed prices, in farm wages and in other production costs. The index of costs in dairy farming compiled by Professor L. C. Cunningham more than doubled between 1941 and 1947.

The spread between sales and product cost of the six companies increased 48 percent between 1941 and 1947, while all expenses rose 45 percent. Receiving, processing and transportation expenses more than doubled between 1941 and 1947, but other major classes of expense increased by only 20 to 30 percent. Selling and delivery expenses show the smallest increase, principally because of the savings made through adoption of every-other-day delivery and other curtailments of unnecessary services.

Sales

The six companies whose figures have been analyzed operate both retail routes for direct service to consumers, and wholesale routes serving stores, restaurants, schools and the like. Their sales on these routes include a rather long list of products, grades and packages. One of the many distribution branches operated by these companies in April and May 1944 distributed more than forty different items on its routes.

In addition to their route sales, some of these companies supplied milk, cream, and other products to sub-dealers. Sales also were made from city plants to institutions, military establishments and other large users to whom deliveries were made in full truck-loads.

Some of the companies in the group manufactured cream, butter, cheese, dried milk, evaporated milk, casein and other products from surplus milk. In the main these products were shipped from country manufacturing plants direct to the purchasers. One of the smaller companies in the group manufactured and sold ice cream in connection with its milk business.

Analysis of the Dollar Volume of Sales

The dollar sales of the six companies during the 12 months ended June 30, 1948 were analyzed by kind of product and by type of trade outlet.

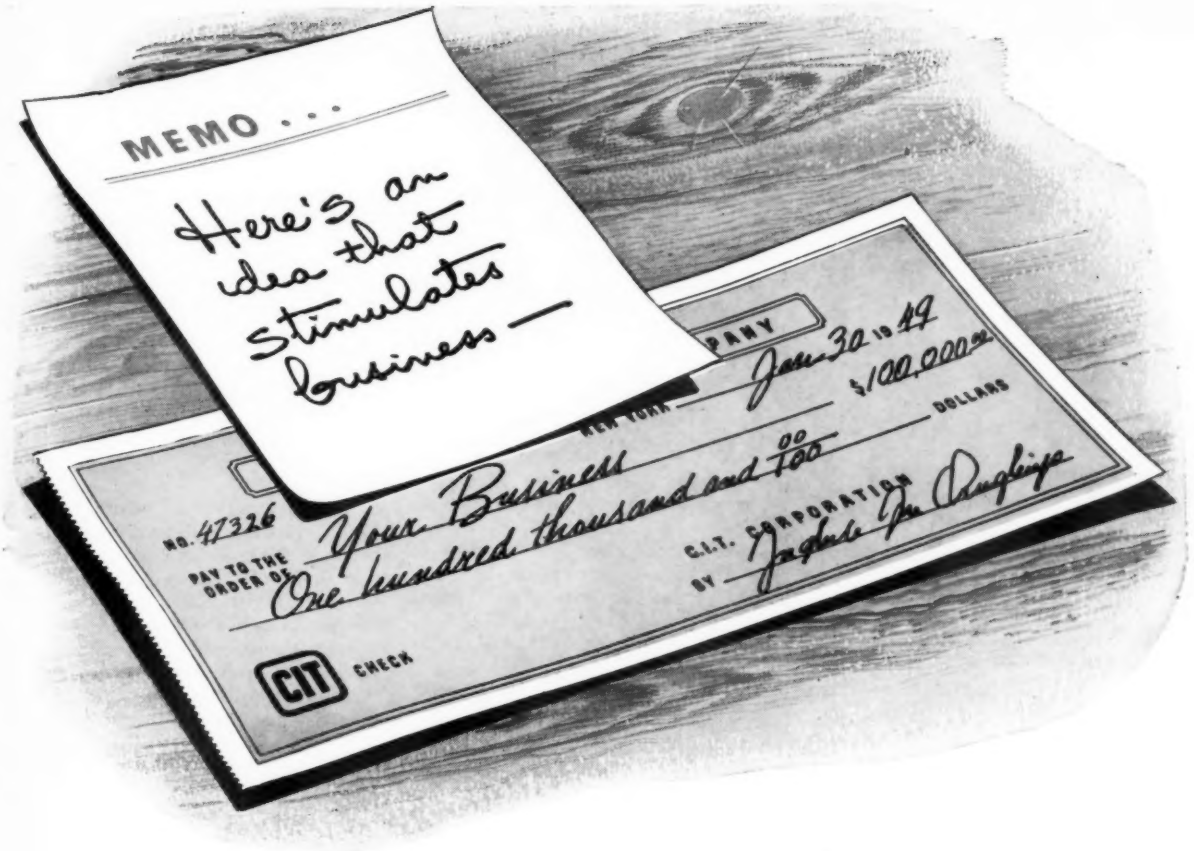
Sales of whole milk through all types of trade outlets amounted to approximately 79 percent of the total sales of all products. All cream sales made up almost 11 percent of the total. Milk and cream together constituted about 90 percent of the total sales. Of the remaining 10 percent of sales, eight percent was contributed by sales of milk products such as butter, buttermilk, chocolate drink, cottage cheese and evaporated milk; and two percent by sales of non-milk products, principally eggs and orange drink.

Milk sales were 85 percent of the total sales on retail routes, 80 percent of the sales on wholesale routes, and 89 percent of the sales to dealers and sub-dealers.

Sales of all products to family trade on retail routes made up 44.5 percent of all sales by these companies, while all route sales to wholesale customers amounted to 46.3 percent. All route sales constituted slightly more than 90 percent of the total business of these companies. The remaining 9.2 percent is accounted for by city plant sales to institutions, etc. (2.1 percent), sales to sub-dealers (3.0 percent) and sales of products made from surplus milk (4.1 percent).

Milk sales to retail trade and to wholesale trade served by routes were approximately equal. On the other hand, the dollar amount of cream sales to wholesale customers was more than three times the retail volume. More than half the milk-product sales were made on retail and wholesale routes. Butter, buttermilk, chocolate drink and cottage cheese were the principal milk products distributed in this way. Sales of milk products such as cheese, evaporated milk, dried milk and casein from country manufacturing plants amounted to 39 percent of all milk-product sales other than whole milk and cream.

It is a fact worthy of note that while these companies are among the leading distributors of milk and cream direct to consumers in this market, yet such sales



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constitute less than half their total business. Except or a substantial number of one-route distributors who handle a relatively small percentage of the total volume, most companies outside this group operate only wholesale routes. Their combined sales run even more heavily to the wholesale type of distribution than do the sales of companies represented in this study.

Milk Equivalent of Products Sold

Various measures are used for the purpose of combining quarts of milk, half-pints of cream, pounds of butter, dozens of eggs and the like so as to determine the physical volume of output or sales by milk dealers. Physical volume of distribution by routes often is measured by "points," a quart of milk, half-pint of cream, pound of butter, etc., being taken as one "point." Another basis of measurement, commonly used to determine the physical volume of plant output is milk equivalent on the basis of butterfat content. In this scheme of computation a pound of heavy cream containing 37 percent fat is equivalent to 10 pounds of 3.7 percent milk, and so on. Skim milk products have no milk equivalent, but are taken account of in the difference between the quantity of cream and the quantity of its milk equivalent.

For the purposes of this study quarts of milk equivalent based upon butterfat content appear to be the most suitable basis for combining the quantities of various products sold. It should be pointed out however, that milk equivalents of products sold by dealers cannot be determined precisely. In the first place there is considerable variation in the yields of cream, butter, condensed milk, evaporated milk, dried milk, cheese and the like from 100 pounds of whole milk. Then too, the records of quantities of products purchased, made and sold are less complete and detailed than the records of dollar amounts.

In addition to these obstacles in the way of precise determination of milk equivalents, there are important questions as to appropriate methods of computation. For example, in computing the milk equivalents shown in this report, cream that was purchased or taken from inventory has been considered the equivalent of whole milk quart for quart, rather than being converted on the basis of butterfat content as is commonly done. Butter that was purchased or taken from inventory was treated similarly, a pound of such butter being considered the equivalent of a quart of milk.

Non-Milk Products Converted

Non-milk products such as eggs and orange drink were converted to equivalent quarts of milk on the basis of the dollar amount of sales. The total milk equivalent of all milk, cream and other milk products was increased by a percentage based on the relationship between dollar sales of all milk products and dollar sales of non-milk products. An alternative procedure would be to treat a dozen eggs or a quart of orange drink as equivalent to a quart of milk.

In general the procedure followed in this study in computing milk equivalents is on the conservative side, resulting in a smaller total quantity than would be obtained by some alternative methods.

The total milk equivalent of all products sold during the year ended June 30, 1948 by the six companies represented in this study, as computed by the methods described herein, was 1081 million quarts. Sales of whole milk constituted 82 percent of the total volume. Cream sales amounted to nearly 10 percent of the total milk equivalent as computed here. Butter, ice cream mix, and other whole milk products sold principally on milk routes made up about 2.5 percent while products (other than cream) made from surplus milk were 3.5 percent of the total milk equivalent. The sales of eggs, orange drink and other non-milk products amounted to 2.2 percent of the dollar sales of milk, cream and other milk products and represented 2.2 percent of the total milk equivalent as computed in this study.

THERE WAS A REACTION

In the wake of Dr. Spencer's report came a cacaphony of cheers and jeers. The New York Daily Mirror (circulation 2,000,000) said editorially, "Profits are the base of our economic system, our very democracy. Communists make a concerted attack on 'profits', and try to give the word an ugly meaning. But fair profit in any business is the customer's best guarantee of quality, service, and economy."

New York City Commissioner of Investigations John Murtagh, who has been engaged in a seven months tilt with the milk industry in New York City, answered the exhaustive five year study by proposing an investigation of Dr. Spencer. The same tactics were pursued by the New York City Consumer Council, an organization that apparently accepts no figures but its own. If you can't refute the argument put the opposition in jail. It's a technique that works in some places.

Kinds and Amounts of Expense

The total payroll expense amounted to 23.1 cents per dollar of sales and to 57.6 percent of the net total expense. The principal item was the salaries, wages and commissions of employees other than company officers. Officers' salaries, including any bonuses paid, amounted to two-fifths of a cent per dollar of sales and made up one percent of the net total expense. Social security taxes, compensation and group insurance and the like totaled 1.3 cents per dollar of sales and were 3.1 percent of the net total expense. To put it another way, payroll charges other than direct payments to employees added 5.7 percent to the amount of such payments.

Expenditures for purchased services and supplies of all kinds amounted to 12.9 cents per dollar of sales for the 7-year period and made up approximately one-third of the total expense of doing business. Freight and hauling and container expenses were the principal items in this group.

Property expenses including depreciation, repairs and maintenance, rent, taxes and the like amounted to four cents per dollar of sales and made up 10 percent of all expenses. Repairs and maintenance charges would be considerably greater than the amounts shown if repair and maintenance work done by company employees were not segregated under payroll expense.

It will be noted that these companies paid milk handling charges to others to the extent of 1.7 million dollars a year during the 7-year period 1941-1947. The reason for this expenditure is that some companies in the group did not receive sufficient quantities of milk at their own country plants to meet their sales requirements in full. Income received for the handling of milk that was resold as raw milk to other dealers was offset against the handling charges paid others.

Other items of expense that appear worthy of mention are: administrative expenses (exclusive of salaries and wages) which represented less than one cent per dollar of sales and two percent of net total expense; advertising and sales promotion, which amounted to .6 cent per dollar of sales; and bad debts which took only .1 cent of the sales dollar.

Non-operating income such as warehouse rent and interest received has been offset against non-operating expenses including interest paid on borrowed funds. All of these items were relatively small in amount.

Expenses during the year for new construction or remodeling, which was deemed at the end of the year to represent improvements or additions were deducted from expense and added to the book value of plant and equipment.

Importance of Payroll Expense

Payroll expense made up a larger share of the selling and delivery expenses than

(Please turn to Page 42)

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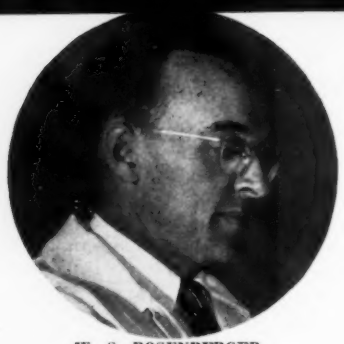

W. S. ROSENBERGER

DON PHLEUGER

ARNOLD NELSON

JIM DAVIES

CHARLES FITCH

Iowa Champions!

By **NORMAN MYRICK**

THE SEVENTY-SEVEN young men and the one young lady were oblivious to the rain that slashed across the windows of the large cream-colored room. Outside the surf lumbered sullenly up the grey sands of Atlantic City's beaches but in the room filled with the smell of butter and cheese, of ice cream and milk, the girl and the young men waited. The Superintendent said, "All right, you may begin now. You have twenty minutes."

They went into action on four fronts tasting the samples of butter, cheese, ice cream, and milk that were displayed on long tables stretching across the room. They sipped and spat, threw back their heads and gargled. They smelled and touched. They waggled their jaws and moved tongue and lip in a rabbit-like pantomime. They rinsed out their mouths with water and one of them took an occasional bite out of an apple. It was the final round of the Fourteenth Annual Collegiate Student's International Contest in Judging Dairy Products and the heat was on. Some character was going to profit by close to a thousand dollars in prize money before the session was over. And a thousand dollars is a thousand dollars.

Thirty-six hours later in the elegant dining room of the elegant Hotel Traymore the verdict was in. While flash bulbs popped and the vanquished cheered, Iowa's champions received the coveted All Products award from the hands of Robert Rosenbaum, past president of DISA. By a margin of thirteen points the boys from Iowa had squeezed out a victory over their arch rivals from Ohio. In a contest marked by the hottest kind of competition, ability, good coaching, and a lot of hard work had hammered out a clean cut triumph.

It was not a new experience for an Iowa team to capture first honors in the dairy products judging contest. On eight other occasions teams from Iowa have been the winners; a record equalled only by Ohio which has been declared the champ in nine contests. Possibly one of the reasons why this 1948 victory was so sweet was because it evened the count at nine triumphs apiece.

No Masic Formula

There is no secret about the success of Iowa State in these judging contest. It has been fortunate in having good students and good coaches. Perhaps the fact of its position as the state college in the Nation's fourth ranking dairy State, whose reputation for butter is world wide, provided an incentive. At any rate Iowa has the reputation and her teams have lived up to it.

Iowa State has been offering courses in dairy industry since 1892. The dairy department, now headed by Professor C. A. Iverson is housed in a modern building of its own. Laboratory equipment, recently modernized at a cost of around $35,000 is said to be the equal of any similar laboratory in the world. More than three hundred students are enrolled by the department each year.

The 1948 champions were products of this environment. They were veterans, all of them were married, all had good dairy industry backgrounds, and as far as the judging contest was concerned they were loaded for bear. Their names were Don Phlueger, Arnold Nelson, Charlie Fitch, and Jim Davies. Their coach was W. S. Rosenberger, Assistant Professor of Dairy Industry.

According to Mr. Rosenberger there is no magic formula involved in Iowa's success. Like all championship performances there must be talent to begin with but the ultimate result is a matter of work and practice and a little more work.

Mr. Rosenberger assembled his squad a full two weeks before school opened last fall. Until classes began, they worked out twice daily for six days each week. After classes began, the schedule was cut to five days a week from mid-afternoon until early evening. Team wives became used to delaying the evening meal until

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Two thousand samples were used in the training program that culminated with a stunning victory over twenty-five other teams representing the best in collegiate judging.

Back to Ames for the ninth time go the silver cups and the handsome medals that are the fruits of victory. Double winner Don Pflueger was presented award by his mother.

7:30 or 8 p.m. when their husbands came home from the workouts. Not a minute of these workouts was taken from class time, and not a jot of academic credit was given for the extra hours spent.

Mr. Rosenberger prepared some 2,000 samples of milk, ice cream, butter and cheese upon which the men exercised their senses of taste, smell, touch and sight. The samples came from all parts of the middle west.

"The biggest job was preparing the samples each day," Mr. Rosenberger says. "I wrote to dozens of dairies, and every one of them cooperated whole-heartedly. Many sent samples without charge.

"We had an infinite variety of good samples of all kinds of dairy products, but poor quality samples were almost impossible to find. If I wanted to get an off-taste in milk, for instance, I had to take good samples and 'fix it'."

All this may sound like a grind, but the squad members said it wasn't. Rosenberger was "just one of the boys", and kept everyone pepped up from start to finish. Everybody had a lot of fun at those workouts.

But they paid off. When contest time approached, Mr. Rosenberger was pretty sure he had a tough bunch of competitors. And the boys themselves had confidence. They knew they were good, and they expected to place somewhere in the upper brackets.

Enroute to Atlantic City, they stopped in Chicago for a final workout. They took a whirl at butter samples at the H. C. Christians Company, and spent some additional time at the Borden Company plant. They matched their judgement against veteran professional men employed by these companies.

Results showed they weren't far wrong.

When they lined up for the big contest at Atlantic City, none of them was particularly nervous—at least none will admit to being so. It was just another workout. They had tasted, sniffed, touched and gazed upon so many samples that a few more didn't bother them. But those who witnessed the contest at Atlantic City knew that the chips were down. There was a tension in the mufflel hum, a tightness that one always finds when the title is on the line. If the Iowa contingent went in relaxed and confident it was a tribute not only to the caliber of the team but also to the ability of the coach who could bring his boys to such a fine edge without marring the temper.

Meet the Coach and Team

Winfield S. Rosenberger is not a cloistered theorist. He has behind him more than ten years of rubber boot and overall acquaintance with the industry. A graduate of Iowa State in the Class of 1940, he holds a B.S. degree in dairy manufacturing. He interrupted his collegiate education in 1930 when he dropped out of school for an eight year stint with the Sidwell Dairy Company in Iowa City. He returned to the University in 1939 and was an alternate on that year's judging team. Following graduation in 1940 he returned to Sidwell as Plant Superintendent for two years and then went to Dallas, Texas, where he held the position of Plant Manager at Oak Farms. He took up his present duties at Iowa in 1946.

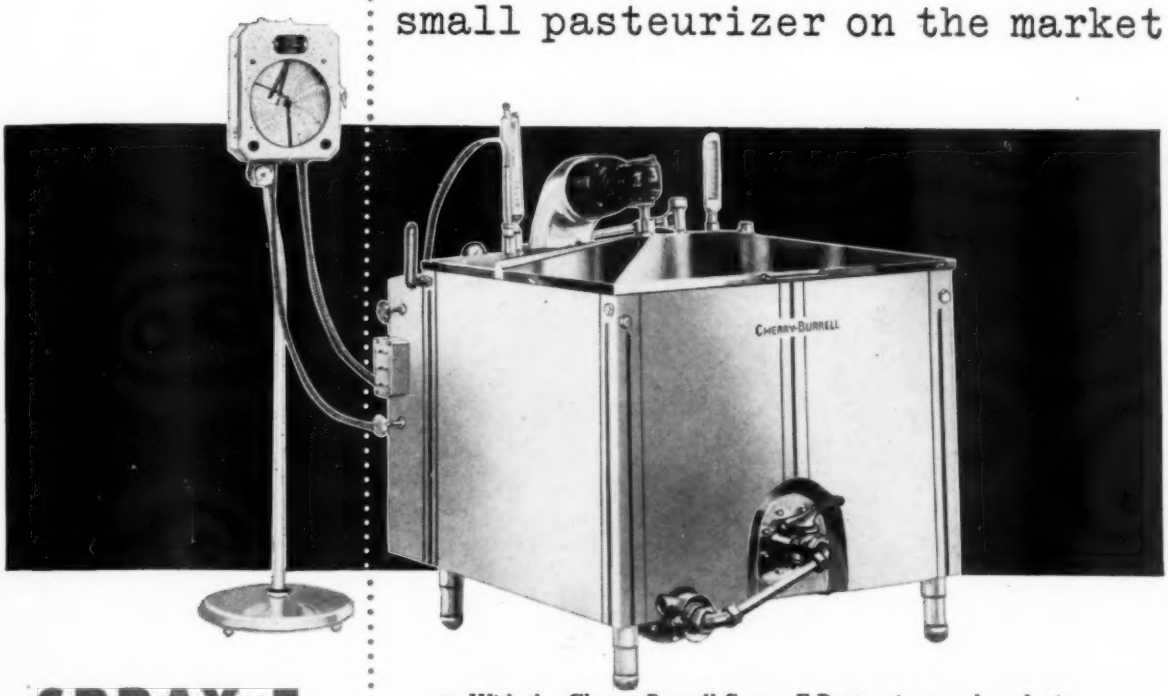
Twice Mr. Rosenberger has taken Iowa teams to the national contest. Twice have his teams been in the money. In 1947 at Miami Beach they finished third despite the brilliant work of Ted Brunner, who captured individual honors in the All Products class, and this year they lead the parade.

It is difficult to say of the Iowa team this man or that man is the star. Individual scoring at Atlantic City showed all three Iowans among the first ten. On the basis of the record, however, the work of Don Pflueger, two-time winner and second in the All Products scoring was the standout job. Pflueger, war veteran, married, and the son of an Iowa State College couple, has been working around dairy plants since he was 12. Both his

(Please turn to Page 61)

Save milk, man-hours and money

...with the most complete small pasteurizer on the market



SPRAY-F

With exclusive patented Sentinel Control

● With the Cherry-Burrell Spray F Pasteurizer and exclusive Sentinel Control even the smallest plant can pasteurize to the most rigid standards — can achieve the cream layer, natural flavor, good body color, and low bacteria count so desirable.

The Spray F Pasteurizer is a *complete pasteurizer* — water and milk pumps, water piping and conduit are built in. Spray F Pasteurizers are available in solid stainless steel finish — or painted exterior with milk contact surfaces stainless steel. And Sentinel Control automatically controls heating water temperature to prevent heated flavors, maintains the proper temperature during the holding period, and automatically turns the heating water on and off, as needed. The Spray F is truly a modern pasteurizer in every way. Send for copy of the Spray F Bulletin or ask your Cherry-Burrell representative.

How to Save Milk, Man-Hours and Money

This new booklet is especially prepared for milk plant operators to outline the ways to use modern machines to the best advantage and to correlate properly all phases of production, to gain the most from every man-hour, every drop of milk. A valuable, up-to-date, informative booklet that is yours for the asking.

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trendmaker in a great industry

Milk GOES *to* FABULOUS SUN VALLEY

Empty milk bottles on the tables at Sun Valley are reminders of the esteem in which skiers hold the food. Young lady on the right is Andrea Mead, 14-year-old Miss who wore Uncle Sam's colors as a member of the 1948 Olympic Ski Team.

By **NORMAN MYRICK**

SIX THOUSAND FEET above sea level in the heart of the Idaho sheep country is the Union Pacific Railroad's fabulous Sun Valley playground. Bedded down in a lush valley at the gateway to the largest wilderness area in North America the famed resort is the ultimate expression of the perfect vacation.

Flanked by a magnificent variety of treeless slopes plus the superb ramparts of Baldy and Dollar Mountains, Sun Valley was originally conceived as a skier's Elysium. On the valley floor was constructed a village of hotels, stores, and opera house. On the hills were built the first chair lifts in the country whose function was to carry skiers from the bottom to the top of the slopes. A brilliant group of ski instructors, skating experts, and dog drivers was assembled to initiate a sports loving nation into the stirring splendor of winter sports. Sun Valley opened its doors in the winter of 1936. Since that time more than three million passengers have been carried up the Baldy's 3200 feet in the "granddaddy of American chair lifts."

The skiers flocked to Sun Valley and in the minds of Americans the resort is most widely known for its unequalled skiing facilities. But there are rainbows in the streams that flow from the Sawtooth Mountains and the ducks swirl down by the tens of thousands when the migratory season is on. It was not long before Sun Valley became an all year round vacation spot offering just about every conceivable activity that an eager public could demand.

That Big Rock Candy Mountain

There are few words that do justice to Sun Valley. In this magic land when a summer sun sifts down through the bright mountain air one can find skaters in shorts and halters cutting figures on the rink of artificial ice. In the winter when diamond studded powder snow covers the ski slopes one can swim outdoors in heated pools where the steam wells up from water that is a comfortable 90 degrees. And in July, high up on Boulder Basin's 9000 foot elevation where corn snow mingles with arctic flora, one can ski or canoe as the spirit moves.

The accommodations offered by the resort are in keeping with the rich recreational resources. Sun Valley Lodge and Challenger Inn are the two prinicipal hostelries. Other buildings such as the Cottage and the Chalets offer lodging at lower rates than the Inn or the Lodge without depriving the occupants of either comfort or convenience.

Skiers Like Their Milk

In the congenial atmosphere of good living that pervades Sun Valley, milk and dairy products play their usual vital but unobtrusive role. One has only to glance at the tables shown in the picture on this page and note the milk bottles left in the wake of hungry skiers to realize that with these "knights of the boards" as with the six-day bike riders and the pro footballers, when energy and stamina are at a premium, nature's most nearly perfect food is the source of supply.

Skiers live in a wonderful world of "schusses" and "christies", of "sitzmarks" and "jump turns". They are finnicky about equipment and will discuss waxes into the small hours of the morning. Their clothes are more varied than the uniforms of an allied expeditionary force. They have a golfer's worship of the correct form. They follow their sport with a devotion unrivalled and will pick up

TREAT SUPREME!

Yes, it's fairly bursting with goodness. This glorious CHEESE SOUFFLE in this appetite exciting, colorful American Dairy Association ad stimulates CHEESE sales! Reaching America's millions, timed for the heavy CHEESE buying season during Lent, this ad has the aggressive support of the industry in sales follow through. Tempting, colorful . . . BIG . . . this message is your way — the ADA way — to "SAY IT WITH SALES."

GORGEOUS MAIN DISH . . . THRIFTY TOO!
Cheese Soufflé
Pronounced "SOO-FLAY"
NEW, SIMPLE, EASY RECIPE . . . STEP BY STEP
Cheese . . . Nutrition and Flavor Goodness at its Best
AMERICAN DAIRY ASSOCIATION
20 N. Wacker Drive Bldg., Chicago 6, Illinois
"VOICE OF THE DAIRY FARMER"
FIRST IN FOODS

This full page, four color, American Dairy Association ad on CHEESE SOUFFLE appears in LIFE, March 21 issue, carrying its powerful sales appeal to 27 million readers, with merchandising follow through at the point of sale to move more Cheese to the tables of America's millions.

AMERICAN DAIRY ASSOCIATION

20 N. Wacker Drive Bldg., Chicago 6, Illinois

"VOICE OF THE DAIRY FARMER"

Sun Valley village is virtually self contained with facilities ranging from smart hotels to post office, opera house, and stores. One of the resort's three skating rinks is shown in the foreground.

Buses provide transportation to the unequalled ski slopes that surround the village. That circular glassed in affair on right where the steam is rising is one of the outdoor swimming pools.

the slightest wise crack with "Sir you are speaking of the thing that I love." On one subject, however, skiers are united. In order to ski one must be physically fit. In order to be physically fit one must eat well. In order to eat well one must have plenty of dairy products, particularly milk. From the Laurentians to Mt. Rainier, from Tuckerman's Ravine to Sun Valley, beer cans and milk bottles are the spoor by which a skier may be known.

Curious about the amount of milk consumed in Sun Valley, *The American Milk Review* queried the Union Pacific Railroad. The railroad referred us to Steve Hannagan Associates who handle the public relations for Sun Valley. The Hannagan office queried Mr. Jim Scanlan who heads up the Sun Valley News Bureau. Mr. Scanlan, with creditable journalistic zeal, turned up the following concerning the Sun Valley version of the milk industry.

Speaking of Good Customers

The resort used 21,190 gallons of bulk milk during the year beginning May 1, 1947 to May 1, 1948.

It used 165,575 half pints during the same period, which it sells when people order "a glass of milk." It pays 6c a piece for them.

The resort used 18,893 quarts of coffee cream, 1400 quarts of whipping cream, and 5,445 half pints of buttermilk during the period.

There is no breakdown on monthly, weekly, daily or per meal consumption of milk. Above figures are simply on yearly basis from which other breakdowns can be made. Heaviest months are February, January, March, August, July, June in that order.

Sun Valley's supplier is the Young's dairy in Twin Falls, Idaho. This dairy furnishes all milk and cream for the resort with the exception of canned milk. Canned milk, (common brands are used) is used for pastry and for babies at the hospital.

The milk comes in both 10 gallon bulk cans and ½ pint containers.

No milk is purchased in bottles with the exception of coffee cream, which comes in 1 quart size bottles.

All milk purchased for the resort is completely whole and is both pasteurized and homogenized. No exceptions are made unless a party at the resort specifically requests skim milk. On these rare occasions it is ordered especially for them. This has happened only once this year.

The resort has an occasional call for goat's milk, which it orders special. One party staying at the resort now orders it and it is supplied by the Ogden Commissary, Ogden, Utah. The resort has had one demand for 50% butterfat cream, which it supplied.

Sun Valley buys its butter from two principal sources, Jerome Cooperative Creamery, Jerome, Idaho, which supplies 1 pound cuts; and C. A. Swanson & Son, Omaha, Nebraska, which supplies Chiplet butter. In addition it buys from other sources both in and out of the state, but the two above are main sources.

There is no spoilage of milk according to J. H. McClure, purchasing agent, who says "If there is any spoilage, they'd better not let me find out about it."

Milk Did You Say

Milk is used in the Duchin Room (bar) in milk rum punches, New Orleans gin fizz, and eggnogs. The consumption is not heavy, average about 12 half pints per day during heavy part of the winter season. Most such drinks are ordered late in the afternoon.

The immediately surrounding area to Sun Valley is not good dairy land since it is mainly populated by sheep. However, in the Magic Valley, approximately 70 miles south, the land is among the best in the United States. This is the area surrounding the towns of Jerome, Twin Falls, Buhl, Idaho Falls, Gooding and Burley.

Skiers use milk in exceptionally heavy quantities. This is proven by the fact that more milk is sold during winter months, that it is sold in larger averages at the Roundhouse and Dollar Cabin, and that the Sun Valley restaurant using the most milk is the Skiers Cafe, which is devoted to the younger budget group of ski enthusiasts. McClure says consumption of milk at the Skiers Cafe, is "terrific" and this is due to the fact that skiers are anxious to keep themselves in shape.

The milk is delivered to Sun Valley by the Young Dairy trucks. Butter, canned milk, etc., all come via Union Pacific Railroad.

Some Powder Used

Powder milk is occasionally purchased for use in making pastry and breads.

Powder milk for babies (common brands) are available in the drug store if the guest wishes to purchase them. Otherwise the local hospital uses canned milk.

Milk shakes are the largest seller of any single item in the drug store.

(Please turn to Page 62)

Here's a Real Money-Maker For Dairies Everywhere

Smith-Lee "CELLOPHANE" HOODS

The better your packaging, the bigger your sales! And Smith-Lee "Cellophane" Hoods offer TWICE the health protection . . . TWICE the sales appeal of ordinary packaging methods . . . yet at lowest cost per bottle.

"Cellophane" Hoods seal the inner cap, the pouring rim, the vital finger-grip area.

They're *moisture-proof* and *tamper-proof!* Famous DOUBLE PROTECTION "Cellophane" Hoods and Smith-Lee Caps give you a two-to-one sales advantage with prospects and customers.

Smith-Lee Hooding Machines Manufacture and Apply "Cellophane" Hoods in One Operation

Smith-Lee Hooding Machines are available in four sizes. This choice permits operation at rate most adaptable to your needs.

"Cellophane" Hoods save manufacturers' profits... store by the roll, save premium space, and enable you to buy at quantity discounts.

ONE ROLL HOODS 10,000 BOTTLES

MOISTURE-PROOF TAMPER PROOF

FREE Advertising-Merchandising Helps

Newspaper advertising mats and radio scripts are supplied to all users of "Cellophane" Hooding. This complete selling plan helps you build bigger routes and profits with "Cellophane" Hoods.

For Full Information, Write Today!

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TWICE CAPPED
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EDITORIALLY SPEAKING . .

NOT A GOOD BEGINNING

THE INFANT YEAR has brought with it more woe than weal in the dairy products market. All along the line prices are falling off, some more, some less. Most alarming of all the portents is the decline in consumption of each of the major items on the dairy products roster.

Fluid milk consumption is down anywhere from 3 to 12 percent depending upon the locality. Butter, locked in a bitter struggle with its arch rival oleo, has fallen from an annual per capita consumption of 17.5 pounds per person in 1940 to slightly over 11 pounds today. Cheese markets are reported weak while the first days of the new year have seen the utter demoralization of the powder market. As a final note in the unfortunate symphony, cream has suffered a radical drop. In Boston, for example, a decline of ten dollars a jug has hit the industry right between the eyes.

Most spectacular of these price drops has been the recent fiasco in dried milk. Precipitous declines amounting to as much as five cents per pound took place during the first week in January. Although, at this writing, large scale operators are holding their price at 15¼ cents per pound carload lots for spray dried delivered in New York and 14¼ cents for roller, it is possible to buy almost any quantity of spray at 12 cents a pound delivered in the city and 11 cents for roller. This represents a startling drop of 30 to 35 percent.

•

REASON for the sudden upheaval in dry milk is the termination of the Government purchase program. Federal buying, both for support purposes and ECA purchases, has been absorbing between 4 and 6 million pounds per week. With the end of such large-scale buying the market naturally took a nose dive. What the future program of the government will be in this market is not known. Queries addressed to Washington have brought no light to the picture.

Taken by itself the stormy situation in dry milk would not be the cause for too much concern. When, however, the problem is considered in relation to the markets for other products and the well-nigh universal price decline among these items, one cannot but feel some consternation.

There is probably no single big reason for these price drops. A great many factors are involved, some historical, some local, and some seasonal. We suspect, however, that competition from other foods, a decrease in take-home pay because of less overtime work, and an over expansion during the war years when dairy products consumption reached an all-time high, are among the most potent influences in the current picture.

•

WE DO NOT believe that the price situation is going to develop into a debacle. Buying power is too high for that. Furthermore, the decline in cow population, which a short while ago was looked upon as a tragedy, may, after all, turn out to be exactly what the doctor ordered. The one thing that we hope the industry will not do is to turn the burden over to the government. The temptation is great, especially among operators carrying large inventories. But if our protestations concerning free enterprise and less government in business are more than high-sounding platitudes, the condition of today's market is something for the industry to solve.

•

DR. SPENCER REPORTS ON PROFITS

AFTER MONTHS OF exhaustive study by a disinterested third party, the latest examination of the records of six leading milk companies in metropolitan New York shows that they made the "huge profit" of one cent per dollar of fluid milk sales. Reduced to terms of quarts the figure stands for all the world to see and heed at exactly one fourth of a cent. That is what the Spencer report shows.

Dr. Leland Spencer is an economist from Cornell University. Most of his adult life has been spent in the study of the economics of milk. This particular study was undertaken at the invitation of six New York milk companies. In accepting the commission Dr. Spencer stipulated that he was to have entire freedom of action and that the chips must fall wherever the circumstances dictated. The report, therefore, has the triple value of having been conducted by an individual without any obligation to the industry save honesty and industry, whose long experience and wide knowledge of the field qualifies him to rank as one of the outstanding milk economists in the nation, and whose integrity and scholarship are above reproach.

The report fulfills a variety of needs. For one thing it reinforces at an opportune time the position of milk handlers everywhere. In the second place it gives an authoritative answer to those critics of the industry who have belabored the milk industry with charges of excessive profits. It also provides dairymen with a potent instrument that can be readily adapted to the needs of their own particular businesses. It is accurate, unbiased, factual information that has absolutely no equal when it comes to combatting ignorance.

It is this kind of farsighted industrial statesmanship that does more good for the cause of free enterprise than any amount of flag waving and high powered propaganda. This report is the truth and the truth is a mighty tough proposition to beat.

•

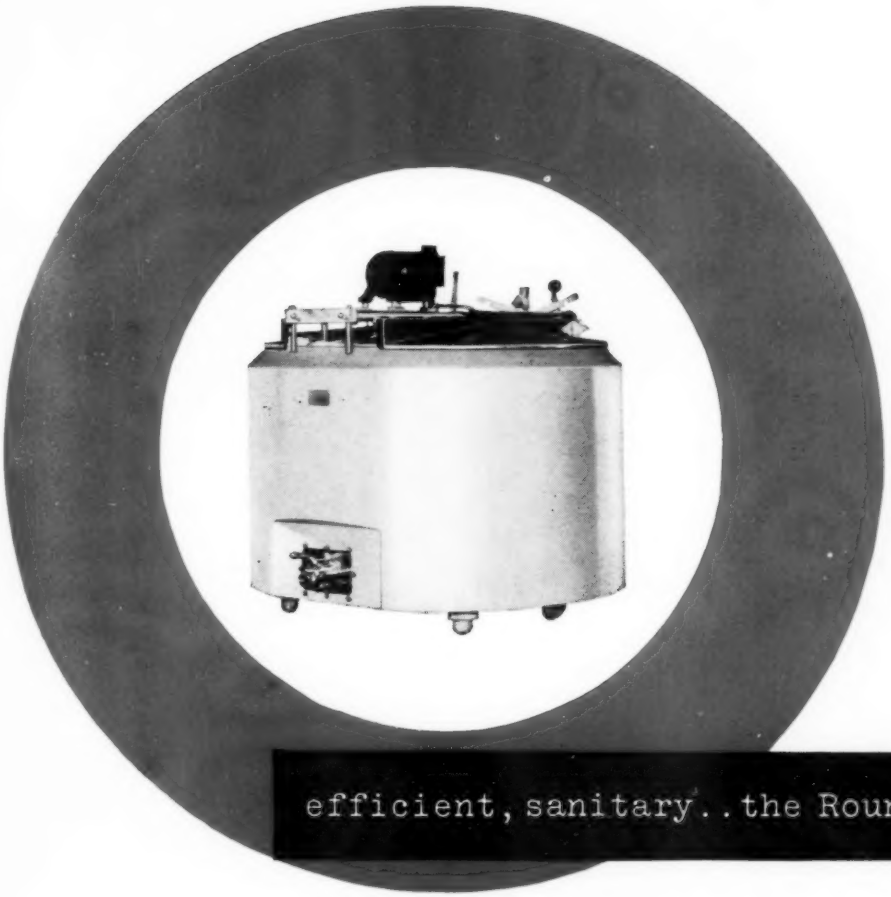
EVERY OTHER DAY DELIVERY

BORN OF A WARTIME emergency Every Other Day Delivery has proven itself to be one of the most important innovations in the field of milk distribution in two decades. Its particular virtue has been the economies that it has effected, economies that have become more vital as an inflationary spiral placed a premium on cost reduction. Many economists declare that one reason for the fluid milk industry's ability to keep its price below the all foods average is due primarily to EOD.

Few handlers will argue against the merits of this type of distribution. But like all good things Every Other Day delivery has its problems. Possibly the most outstanding hurdle relates to flavor.

There have been customer complaints of late concerning the prevalence of an oxidized flavor in home delivered milk. This situation was called to our attention only recently by personal observation and by a circular letter from one of the trade associations. It is a phase of the industry that needs attention.

XUM



Round Processors in plain exterior or De Luxe, all-stainless models available in 300, 500, 600, 800, and 1,000 gallon sizes.

efficient, sanitary . . the Round Processor

● Milk plants are relying more and more on Cherry-Burrell Round Processors. Quality-conscious plant operators have found that a Round Processor is a multi-purpose unit — equally efficient as mixing and holding vat, cream pasteurizer, etc.

In addition to the fast, uniform heat transfer that eliminates "burn-on," the Round Processor is completely sanitary. Smooth, all-stainless interiors are easy to clean, and an advanced design does away with stuffing boxes, rotary seals, and other deterrents to sanitation. It saves floor space, too. Round Processors are also used for buttermilk, evaporated cream, condensed and sweetened condensed milk.

Let your Cherry-Burrell representative show you how a Round Processor can step up your production and quality today. Or mail the coupon below for a bulletin giving full details on the Round Processor.

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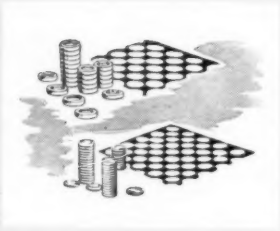
Right here is where

This book tells clearly and briefly the how and why of Dacro P-38. A request on your letterhead will bring a copy promptly.



SAVES ON CAP COST, TOO

Because of its smaller size, the Dacro P-38 Cap takes less material to make and sells at a lower price. It saves money on caps every day you operate.

MAKES A HIT with HOUSEWIVES

Consumer acceptance of the Dacro P-38 . . . both Steel and Aluminum . . . is a well established fact. Housewives like Dacro's protection and its convenience in daily use.

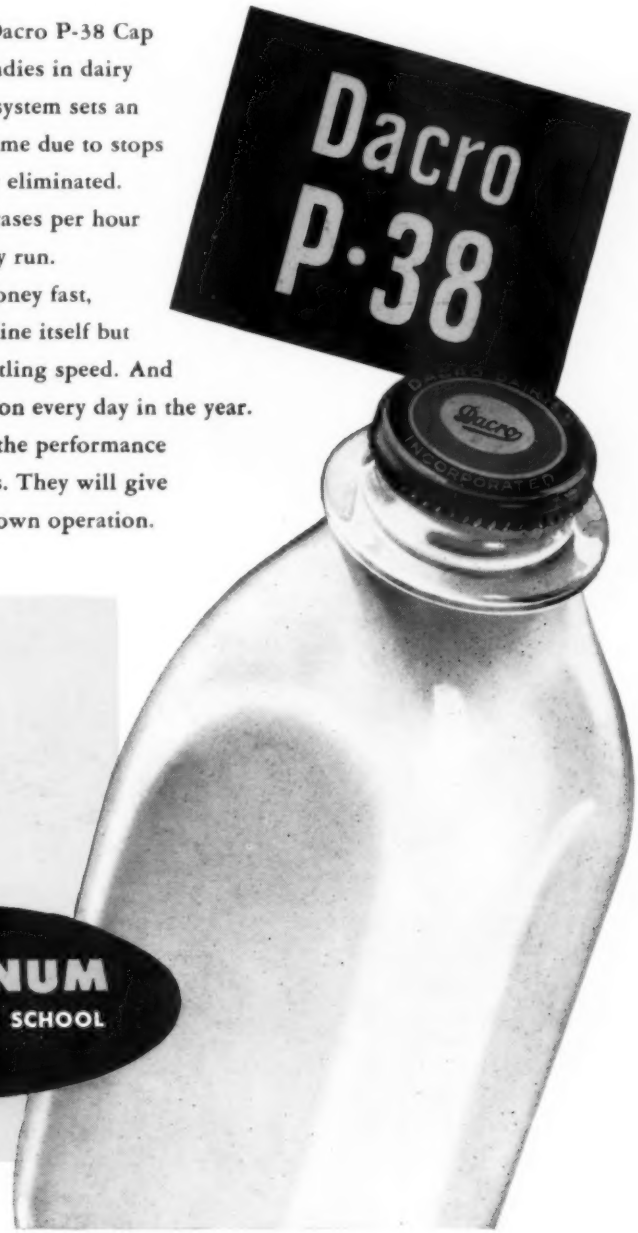
CROWN CORK & SEAL COMPANY • DACRO DIVISION

Dacro P·38 saves time .. and money

Suppose you could cut 15 minutes, 30 minutes, or even an hour, off the time you run your bottling line and all its attendant operations . . . bottle washing, bottle inspection, cold room, loading, etc. You'd be saving some real money, wouldn't you?

Time savings like that are being attained with the Dacro P-38 Cap in dairies large, medium and small. Performance studies in dairy after dairy show that this modern cap and capping system sets an entirely new standard of operating efficiency. Lost time due to stops and delays at the capping head is almost completely eliminated. Dacro's fast, continuous capping gives many more cases per hour . . . reduces the total time needed to make your daily run.

Time saved on the bottling is time that runs into money fast, because the saving applies not only to the bottling line itself but also to all the other operations affected by your bottling speed. And don't forget that with Dacro P-38 these savings go on every day in the year. Ask a Dacro Sales Representative to show some of the performance studies which have been made in Dacro P-38 plants. They will give you an idea of the savings you might effect in your own operation.



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FOR THE HOME DELIVERY TRADE

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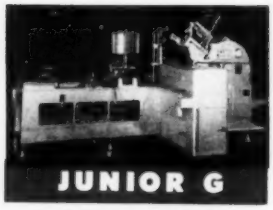
THE LINE FOR '49

THE WORLD'S BEST CONTAINER FOR MILK "MADE" and FILLED in the DAIRY

A Complete Range of Machines for Dairies of all Sizes

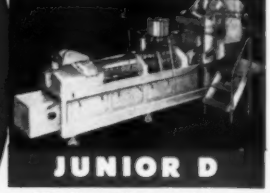
20 Units Per Minute



35 Units Per Minute

LIFT ① OUTER SEAL
INNER SEAL ② OPENS
Automatically!

65 Units Per Minute



25—½ Gallon Per Minute

50—½ Gallon Per Minute

Here's your winning combination for '49—the double-protection container plus the only *complete* milk packaging machine. With Pure-Pak the entire packaging operation is controlled in and by your dairy. It protects the purity and goodness of your milk with a certified-quality double seal. . . . This exclusive, double-protection container gives you an *exclusive* sales advantage for merchandising your milk and allied products. Sooner or later you will package in paper—make no mistake, make it Pure-Pak, for sales, service and satisfaction.

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PLEASE SEND COMPLETE INFORMATION ON:

☐ Milk-Packaging Machine . . . Model _____
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NAME _____

CITY _____ ZONE _____ STATE _____

"How to Produce and Deliver HIGH-QUALITY CREAM"

By **E. M. BARKER**
Rochester Dairy Cooperative

FOR MORE THAN A quarter of a century some volume of cream has been shipped into Eastern markets by Midwest suppliers. These shipments have been more or less spasmodic both in volume and quality. During this time considerable gathered cream as well as that separated from fresh milk has been utilized. Indeed, you will recall that as recently as the late war years, because of almost desperate circumstances, much gathered cream was shipped to the East and to other critical areas. Fortunately, this situation no longer prevails because fresh milk supplies are readily available from which to select and process high-quality cream.

Several fundamental considerations essential to the production of a large volume of good cream are of great importance. The first is the tremendous supply of milk necessary. Most of the cream is shipped in cars of two hundred or more cans. Translated into terms of fresh milk, this means that approximately 200,000 pounds must be available for each minimum carload. Any concern shipping up to three cars of cream a day must have available from 200,000 to 600,000 pounds of fresh milk daily. Readily apparent then is the extreme importance which volume operation plays in the production of quantities of high-quality cream. The second factor is the absolute necessity of maintaining proper control through established laboratory and plant procedures, for without control volume operation is of no consequence; each must supplement the other if good cream is to be the result.

High-quality cream may be defined as cream having certain desirable attributes.

Collectively, these attributes comprise the character of the cream and to health officials and buyers must connote at least the following:

1. Freedom from pathogenic organisms, toxins and extraneous material—low in total count.

2. Acceptable to the consumer in every respect, primarily flavor.

3. No developed acidity; altered in *no* way *except* by pasteurization.

4. Excellent body and physical characteristics.

5. Uniform in all respects, acidity, butterfat, temperature, weights of cream in can.

6. Esthetic background through evidence of good producers and plant facilities.

The production of high-quality cream is dependent upon:

1. The sanitary quality and good flavor of the milk supply.

2. The proper assembly at the plant.

3. The care and precision with which both the milk and cream are treated during each stage of receiving and processing.

Recognition should be given to the fact that the health official is as keenly interested in the production of high-quality cream as he is in milk. Protecting public health is his major concern. Therefore, he must have the utmost confidence in the integrity of cream suppliers. He must know that suppliers insist on continuous quality improvement programs which govern each milk producer as well as processing methods. The quality program employed must guarantee him adequate facilities on the farm and continuity of enforcement. In short, health officials need every assurance that supplies under their jurisdiction are produced in clean, healthy surroundings by careful people and processed according to the highest existing standards.

Buyers Concerned With Quality

Buyers of cream are definitely interested in all of these factors. They take largely for granted, however, the safety of a supply. Undoubtedly they are involved much more closely with final consumer acceptance. Regardless of all other assurances, if the cream ultimately fails to register consumer acceptance, it has failed utterly in its chief function. The cream buyer then is not particularly concerned with the cheapest product to be purchased, although of necessity, economy is relevant. He is concerned primarily with the highest quality product which he can buy over a period of time. In addition, he must be assured of its original good production. Subsequent precise processing treatment must guarantee its final favorable acceptance. Together, he and the health official are concerned with all individual items which contribute to the goodness or character and to the safety of the supply under consideration.

Western cream shippers, as a group, are cognizant of what is demanded by Eastern health officials and buyers. As a result, huge sums of money have been expended for the express purpose of improving their supplies of milk and cream in order to qualify for such markets. These expenditures have been on both producer and plant facilities. They appreciate that health officials and buyers in general have cooperated with them and extended much assistance in the form of sound counsel and continuous encouragement. Western shippers fully realize their obligation and responsibility in delivering a safe, dependable supply. Moreover, they understand that it is necessary not only to furnish cream for manufacturing purposes, but to supply cream which meets bottling specifications as well.

In order to comply with the specifications for high-quality cream, numerous requirements and objective tests must be continuously utilized. Certain platform tests have proven invaluable tools in the improvement of a supply. These are always in evidence in a plant where quality control is exercised. One of the most important tests is that of flavor or odor. No intake is doing justice to quality-improvement work unless every can of milk is checked for off odors and the contents scrutinized for off-colored or dirty milk. Even though the mechanics of this job are evident, adequate grading will not be realized unless the men are properly trained to recognize that for which they are looking. No man should be stationed in an intake who is not an

Presented at Second Annual Meeting Dairy Products Improvement Institute, Inc., Hotel Commodore, New York City, January 12, 1949.

expert on milk grading. Wide and narrow differences in odor and flavor are immediately apparent to him and rejections are decided upon quickly. If the milk is slightly off in odor and yet not sufficiently poor to warrant rejection, a warning tag with that specific odor checked should be attached to the can. This is for the benefit of the producer, but a duplicate of either a warning or reject tag should always be immediately available for the fieldman. This permits contact with the producer at an early date and keeps the fieldman currently posted as to exactly what off-flavor condition prevails in his immediate supply. In this manner he is better able to discuss similar problems with other producers.

Cannot Take Clean Milk for Granted

Although sediment-control work has been in force many years, clean milk cannot be taken for granted. At least once every two weeks, and more often if necessary, pint sediment samples of milk must be drawn from the bottom of the cans. Since it has not yet been proven that any supply will clean itself, rejections are inevitable. Health officials as well as national service organizations, have largely established sediment-grading standards presently employed. The figures for standards in Minnesota, as well as several surrounding states, indicate that 0.5 mg. of sediment or under is satisfactory. A pad carrying 2.5 mg. is acceptable for a period of only seven days. Any grade higher than this figure represents reject milk. In all cases it is essential to examine the remainder of the cans of milk in the lot when either No. 3 or 4 pads are collected. On succeeding days the supply must be further checked until it is satisfactory. During periods of difficulty, the desirability of having the fieldman constantly in touch with both plant and producer is evident. By instructing the producer to dry and save his filter discs for comparison with the type of sediment on the smaller pad, an early clue may be had which will eliminate the trouble.

Any comprehensive program must include a satisfactory arrangement for collecting and running producer bacterial counts with provision for adequate follow-up. Such a system will depend on facilities available in the plant. The one which appears most promising is the direct microscopic method. Its several advantgaes are evident but will bear repetition.

1. The results are available almost immediately. In case of high counts, the fieldman may begin corrective work at once.

2. Frequent wide coverage of a shed by few individuals is permitted.

3. Sources of trouble may be identified by various types of organisms.

4. Mastitic herds, individual cows and quarters are exposed. Since milk from diseased herds is extremely objectionable, the early diagnosis and treatment of infected quarters is an obvious benefit to both producer and processor. Follow-up work can be either in the form of additional microscopic counts or by the use of the methylene blue method. While the correlation is doubtful, the blue test is indicative of general conditions. Follow-up measures on high-count producers are necessary adjuncts of any improvement program and must be consistent with the needs of a particular area. They are the working tools of good fieldmen.

Thermoduric counts are regularly employed with success, and the application is either to individual or bulk samples. In both cases the results indicate the cleanliness of utensils or equipment with which the milk has come in contact. It is excellent practice to regularly check line-run samples for thermoduric counts. Treatment for high counts is obvious.

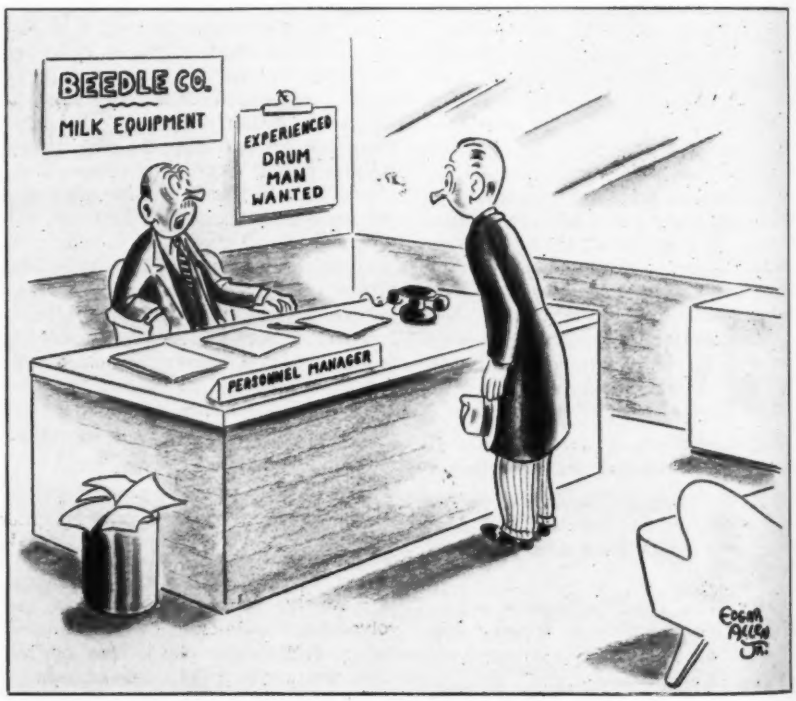
Get Those Cans Clean

The subject of can washing and return of satisfactory cans to the producer, is too important to ignore. Unfortunately, in a number of milk sheds the dairy plant is solely responsible for the condition of the returned cans. The obligation of the producer ends when he has sometimes very carelessly rinsed the cans with a germicidal solution. Since this situation prevails in many areas, it behooves plant management to return cans in as nearly perfectly clean and sterile condition as possible. This means that the washer is an exceptionally important piece of equipment. None currently on the market is perfect; most of them, however, will rinse, wash and sterilize much better than is realized, provided they are kept in excellent mechancial condition. While Standard Methods recognizes bacterial counts of 40,000 per can as permissible, this seems too liberal. At least several large dairies in the Middle West have consistently producer cans over a period of several years with a logarithmic average of 3,000 per can. This fact attests that good cans are available for the producer if equipment is properly maintained and care manifested in its daily operations and clean-up. Regular inspection of all producer cans is obligatory even though the washer is sustained in good condition.

Large-volume operation requires in some cases the assembly of milk at receiving stations. Otherwise great amounts of milk must be dumped at several intakes in the main plant. Obviously, it is impossible to process all of it immediately and consequently adequate cooling

Dairy Daze

By Edgar Allen, Jr.



"I'M AFRAID, MR. POOKS, PLAYING WITH HARRY JAMES ISN'T THE KIND OF EXPERIENCE WE MEAN!"

"ADVERTISING will play an important part" says G. E. WALLIS

This is a period of reappraisement — when all of us, whether we sell dairy products or dairy machinery, are setting our sights anew to accomplish the most effective selling job possible. Advertising will play an important part in this campaign. In the consumer field, this means a constant effort to keep the public ever conscious of the nutritional value and taste enjoyment of dairy products. In the equipment field, this means a consistent campaign to keep processors informed of the labor-saving and product improvement of newly designed equipment and plant arrangement.

Today, we all have the challenge of doing everything we can to help increase both milk production and consumption. When you stop to consider that the same per capita consumption of milk in 1949 as prewar would require at least 12 billion more pounds of milk than were produced in 1948, you can visualize the opportunity that lies ahead in bringing up milk production to prewar per capita levels.

The challenge is twofold — first to help increase milk production and second, to keep the consuming public sold on dairy products even when supplies are limited. It will require the combined efforts of all groups comprising the dairy industry to accomplish the desired results.

PRESIDENT AND GENERAL MANAGER THE CREAMERY PACKAGE MFG. COMPANY.

For more than 50 years The Creamery Package Mfg. Company has advertised without interruption in AMERICAN MILK REVIEW and its predecessor Urner-Barry Publications. An all-time record, we believe, in the dairy industry.

AMERICAN MILK REVIEW . . .
THE INDUSTRY-WIDE
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MILK PLANT OPERATORS

facilities are indispensable. None of the milk should be stored any length of time without cooling to a temperature of 40° F. or below. Good receiving and production methods demand that air-free pumps and lines be employed. The trend to completely enclose systems is in progress and eventually means further improvement. Copper-free equipment, fittings and lines are necessities if off flavors are to be avoided. Great care must be exercised in the daily washing and sterilization of all equipment. Guarding against oxidized and metallic flavors is essential. These may be caused by inadvertent applications of strong hypochlorite solutions at inopportune times and by other poor practices.

In actual processing operations it is important to use proper type pumps. There are positions in the line where positive-displacement types are preferable if cream-body injury is to be avoided. Proper preheating of the milk prior to separation is essential because correct separation temperatures must be met and maintained. This, of course, involves cooling the cream and maintaining it at a low temperature until the vat of cream is ready for pasteurization. Where long-time pasteurization is employed, there is ordinarily considerable lag between start and finish of the vat depending on its size. The necessity for proper treatment of both milk and cream during these several stages cannot be overemphasized. Wrong pumping, extreme temperatures or too vigorous agitation may result in both off-flavored and poor-bodied cream. In vat pasteurization, the equipment must be so designed that the interval from start to finish of pasteurization is not great. Likewise the design plays an important part in fast cooling immediately following the heating period of pasteurization. If flash pasteurization is utilized, several advantages are evident. Cooling the cream after separation is eliminated and both lags then are virtually non-existent. However, it should be remembered that time-temperature relationships must be consistent with negative phosphatase values, low total counts and good-keeping quality from the standpoint of chemical deterioration.

The War on Bacteria

Through the entire processing period every effort needs to be exerted to avoid bacterial growth in the products and particularly to eliminate any possibility of contamination after pasteurization. To this end all equipment should be designed. Pockets in lines, non-flush and leaky valves, plus any dead ends, are dangerous. Multiple vat installations require leak-protector valves. Thermometer stems must be easily removable; foam heaters should be so installed that debris from steam lines is not thrown into the product. The possibility of overhead drippage into the vats is to be avoided. When vats of cream are to be standardized for fat, the milk or cream should be added before the pasteurization process is begun. Where this is impossible, it may be accomplished later only with adequate precautions. Any product added after pasteurization must be fresh, low in total count, and of comparable quality. The method of adding must bear scrutiny. Cabinet coolers are chronic offenders if care is not exercised in washing and sterilizing them. Some types are extremely difficult to clean. Because it is nearly impossible to insulate parts of them, heavy condensate is the inevitable result, and naturally contamination at these points is always a possibility.

HE MOWED THEM DOWN

Stealing a march on neighboring farmers, Henry Whalls of Iona, Ont. milked his 20 cows during a recent hydro cutoff with a borrowed lawnmower.

When the ice storm cut his hydro power off along with services to hundreds of farmers in the district, Whalls borrowed a power lawnmower from Alfred Silcox of Shedden, removed the bolt, blocked up the gasoline motor and attached it to his milking machine. His cows were milked in record time while other farmers stayed up all night using the old-fashioned hand method.

To sterilize equipment properly, hot water not less than 200° F. should be run through and over all of it for a period of at least 10 minutes. This treatment should extend to the filler valve and at this point the valve should be immersed for the above-suggested time.

To check regularly on contamination of the cream supply, coliform counts should be run. While several heat-resistent strains have been isolated, Buchbinder and Fertig[1] of the New York Department of Health discovered after the 30-minute holding period, only one coliform positive sample in 400 lots of milk. Significant, however, is the fact that three-fourths of all quart samples collected from New York plants were coliform positive after overnight incubation at 37° C. Dahlberg[2] ascertained that coliform organisms outgrew other types at cold temperatures and in a few days at 45° F. or above they became a signeficant percentage of the total population. In some instances when stored at 45-50° F. the coliform count was more than one-half of the total count. In Dahlberg's words, "It is obvious that milk should always be held below 40° F. to limit coliform growth to a minimum." The work on milk by these investigators emphasizes the extreme necessity of avoiding coliform contamination in cream after pasteurization as well as proper cooling and the maintenance of low temperatures until the product is used. Therefore:

1. All lines and equipment must be sterilized immediately before use.

2. Air-borne contamination is to be avoided.

3. Employees must be trained to be particularly cautious about clothes and hands.

4. Parchments under lids must be properly stored and handled.

5. The product should be cooled to 40° F. or below.

The second most important bacteriological problem involving re-contamination, is that of psychrophilic organisms. A number of cream suppliers have experienced sporadic outbreaks which have not always been immediately or easily controlled. Dr. A. C. Fay of H. P. Hood and Sons, even prior to 1941, performed much research on this problem and arrived at the following conclusions:

1. Psychrophilic organisms are consistently destroyed by pasteurization.

2. Samples of cream from adequate pasteurized vats taken at the bottom of a cooler, show the presence of psychrophilic organisms. This obviously suggests that the source of contamination is intimately associated with the pipe lines, cooler and cooler pan.

3. Sterilized cream inoculated with rinse water from over the cooler, shows conclusively that these organisms are present in the rinse water from the hose.

These conclusions have been verified by other investigators, and additional work has proven the necessity for adequate sterilization of cans or jugs before filling. It is known that low-count cream, entirely free from psychrophilic organisms, may be delivered at the filler valve and yet develop amazingly high counts in a few days, due altogether to contamination from poorly-washed and sterilized cans. The use of good containers and covers cannot be overemphasized. The most practical solution to this is the use of additional sterilizing apparatus, employing high heat in the conventional can washer. It may also be necessary to slow down the rate of cans through some washers to allow for added exposure. Where the practice exists of rinsing the outside of the can after filling, care must be exercised that no raw water contaminates the cream. It is evident that contamination with raw water at any point is

(Please turn to Page 62)

CUT DOWN COSTLY MAN HOURS with GIRTON

Sanitary Pipe Washing EQUIPMENT

Many plants are learning that lower labor costs quickly pay for this specialized equipment. Substantial savings result which cost-conscious management cannot afford to overlook. What can this equipment do for your plant?

Write for complete Bulletins.

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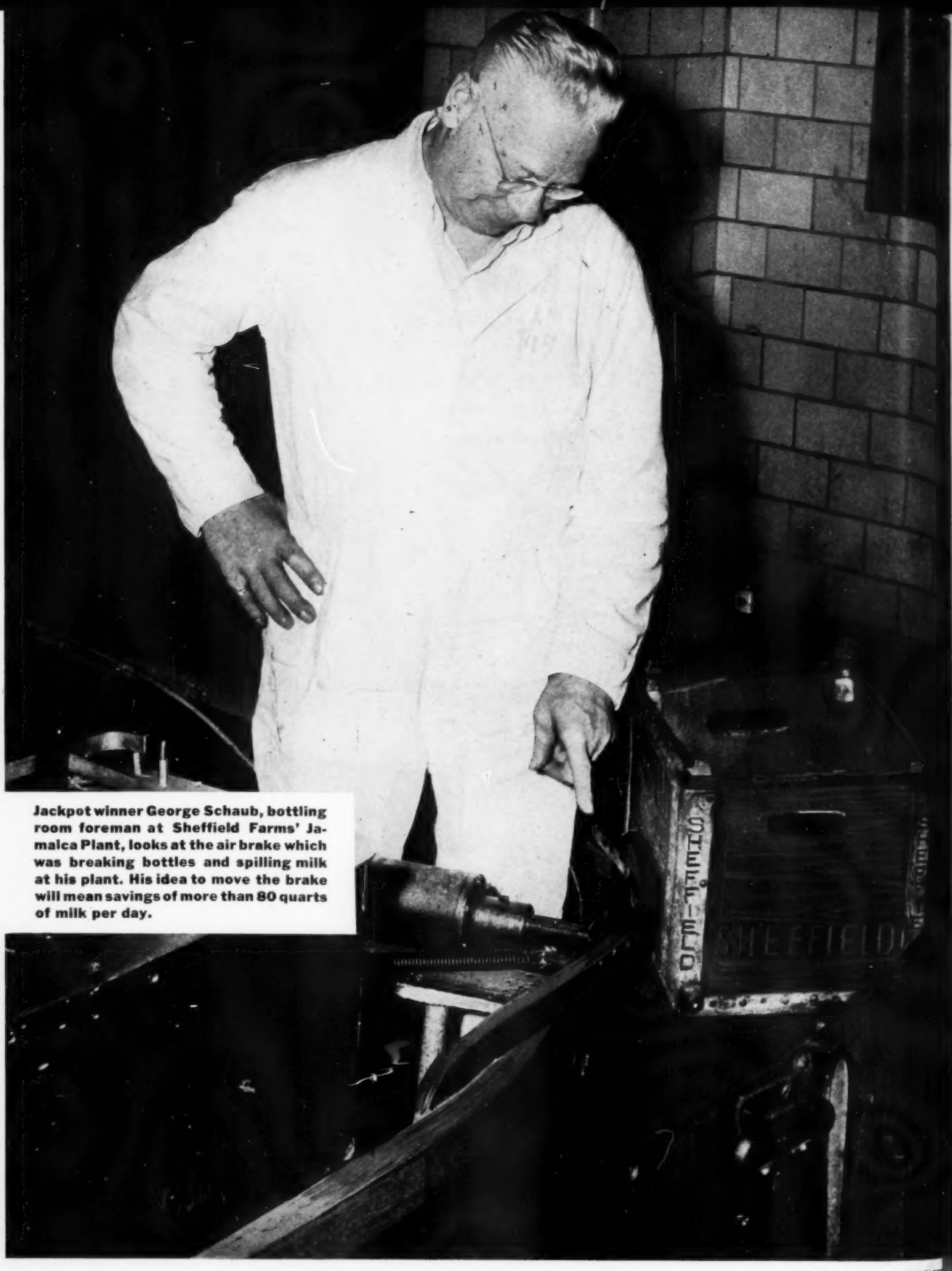

Jackpot winner George Schaub, bottling room foreman at Sheffield Farms' Jamalca Plant, looks at the air brake which was breaking bottles and spilling milk at his plant. His idea to move the brake will mean savings of more than 80 quarts of milk per day.

PHOTO COURTESY SHEFFIELD

EMPLOYEE SUGGESTION SYSTEMS

Two Heads Are Better Than One if the Heads Are Properly Handled — The Author Answers Twenty-five Pertinent Questions on the Subject

By **ERNEST A. DENCH**

Opposition from Foremen

QUESTION: A newly-started suggestions plan is meeting opposition from foremen.

ANSWER: It's to be expected; in fact, one of the largest corporations ran up against the same brick wall twenty-five years ago.

Human nature does not change. In every organization will be found men in minor positions of command jealous of their rights. This type wants to be consulted *first* before any department improvement ideas are circulated by the men under him. Sometimes he acts as censor; sometimes he grabs the credit. His fear is that some worker under him may, because of a valuable suggestion, be promoted to HIS (the foreman's) job. When this attitude prevails, the lower workers sit still and do nothing, for fear they may be fired.

The most important thing is to sell the foremen on the campaign. The salespoint is "no team is stronger than its weakest link." Foremen who are sold will, in turn, draw out their men. And to sell foremen, a bonus to the department submitting the greatest number of accepted suggestions during the year, or campaign period, is a major help.

Are Executives Eligible?

QUESTION: Should suggestion plans be open to executives above the rank of foremen?

ANSWER: No. Top executives are, in the main, paid—and paid liberally—to THINK and PLAN. Ideas coming from non-executive workers are SUPPLEMENTARY to executive thinking and planning. Frequently an idea right off the plant floor provides a full or partial solution to a problem some executive may have mentally wrestled with for weeks or months.

Male or Female Contributors?

QUESTION: I'm told we will get better results by aiming our suggestions campaign chiefly at men. Right or wrong?

ANSWER: Right. The difference is that most women consider industrial work merely a pre-marriage lever. To men it is a lifetime career.

Even during the wartime peak, when women workers greatly outnumbered the man in many plants, the percentage of feminine suggestions did not proportionately increase. This condition prevailed, too, in Britain, where, because of wholesale bombing of homes, and killing of civilians, one would have expected an emotional incentive.

Personnel Response Averages

QUESTION: What's the usual ratio of suggestions from employees after such a plan has been running a year or longer?

ANSWER: The annual average is one suggestion from each employee. This takes into consideration that some employees are more fertile or prolific than others, and thus contribute several ideas apiece. A minority will remain aloof or sterile.

Indifference of Employees

QUESTION: A sour note to write on a bright, sunny morning. On and off through the years we have tried out several employee suggestion plans. Few takers among our employees. I send you specimens of the plans adopted.

ANSWER: From the evidence submitted, you have been paying on a "chicken feed" basis—from $1.00 to $5.00. The awards made to date, we note, are for trivial improvements. Typical of these is the one for attaching holders to pencil stubs, to get every fraction of a penny's use out of a nickel pencil!

It is true that, in this world, you get only for what you pay. Your more intelligent employees will do the necessary *deep* thinking if the reward in prospect is commensurate with it.

Two firms with a succession of successes in suggestion schemes since 1902 and 1917, respectively, share the financial outcome with each suggestor—fifty percent in the first case, and from twenty-five to thirty-three percent, in the other. These percentages are based on the first year's savings.

How Much Remuneration

QUESTION: I wonder whether what we are paying for employee suggestions is in line with other firms.

ANSWER: Check-up made by a trade association discloses that ninety per cent of the members start the awards with five dollars; never less. Above that sum, there is no ceiling, awards depending on merit, which means a fair percentage of the actual or anticipated financial savings to the company.

Is Money Everything?

QUESTION: Perhaps you can enlighten us if the monetary reward is the one and only employee suggestions scheme incentive.

ANSWER: It all depends. If a firm has had harmonious relations with its employees over a long period, with periodic rewards (regardless of suggestions contributed) in bonuses and stock as a share in the company's net earnings, then each employee may consider he is a partner rather than a mere employee.

Another incentive, sometimes in conjunction with the above set-up, and sometimes not, concerns the conscientious employee. Individual craftsmanship pride outweighs all other consideration.

The Ideal Number of Awards

QUESTION: Am wavering between lots of smaller awards or a few big plums. Your advice welcome.

ANSWER: Fundamentally, choice hinges on the number of employees on the payroll. From say, fifty employees, there will be less competition for the big plums. But in a company employing a thousand or more, these big plums lose their lure—too much competition!

Regardless of the number of employees, it is a sound policy, when the entries are meritable on the whole, to spring a few additional prizes without advance notification. Such an unexpected outcome goes over wonderfully well with the entire force.

Another morale alternative, when there is a time limit on a suggestions contest, is to carry over rejected suggestions until the next contest, when they will AGAIN be considered. Standard of entries in successive contests is rarely as high as in the first contest, in which the brainiest employees unloaded their BEST suggestions.

What Compensation for "Pooled" Suggestions?

QUESTION: Our policy is to pay for plant production suggestions on a percentage basis. We're in a jam—one

man made the suggestion, while his co-workers will be responsible for the results in adopting the suggestion. Should we split the percentage?

ANSWER: Your firm's legitimate cut, for the production economies, pending or actual, is fifty per cent. This leaves a fifty per cent bonus for the employee end—twenty-five per cent to the man originating the suggestion, with the remaining twenty-five per cent equally distributed among other employees in the department.

Crackpot Schemes?

QUESTION: Our first campaign for employee suggestions drew heavy verbal fire from the crackpots.

ANSWER: Some such employees may have ventilated things long on their minds. For instance, the desire for bar or cake soap in the washrooms instead of powder or liquid dispensers.

These suggestions have a definite nuisance value in that the employer can, in perhaps no other way, determine what's wrong with his personnel relations. Contentment often hinges on consideration of the little things—the soap incident being one of them.

Every firm is, of course, concerned with suggestions to cut costs, sell more, etc. Any campaign should specify the KINDS of suggestions desired

Positive vs. Negative Suggestions

QUESTION: We'd like to discourage the submission of negative suggestions.

ANSWER: The armed forces thrived on griping during the war. Little attempt was made to discourage it.

One civilian firm in Britain has, within its plant a number of "Grumble Posts." These are boxes in which workers can insert their written kicks. The boxes are located in heavy-travelled plant areas. Each "post" is sloganized with—"If you don't like it, WRITE what's on your mind, and drop into the slot."

Suggestions Guidance

QUESTION: We are newcomers. Please advise what types of suggestions are sought by employers?

ANSWER: First are those in the dollars and cents category—to increase production, lower production, maintenance or distribution costs, produce a higher-grade product by the elimination of defects. Next is welfare, chiefly safety-first measures.

Complex or Simple?

QUESTION: When we ask for new ideas, some of our employees seem to feel they must be complicated to win an award. Can we remove that mistaken impression?

ANSWER: Yes; explain, as one firm did, that "it isn't complexity you need, but simplification—how to do things easier and quicker, perhaps even by eliminating an elaborate or expensive gadget."

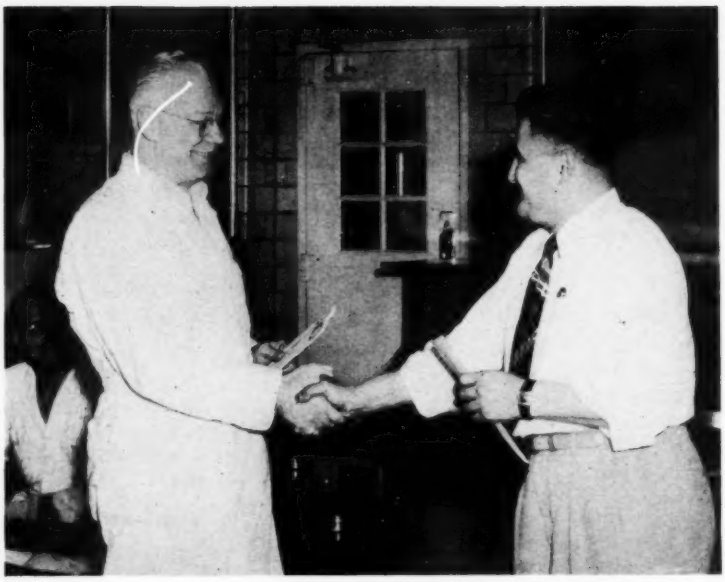

PHOTO COURTESY SHEFFIELD NEWS

Adequate reward for an idea is vital to the success of any employee suggestion plan. George Schaub, whose air brake re-arrangement saves Sheffield Farms more than eighty quarts of milk a day, received $500 for his suggestion.

Another firm made this equally effective explanation: "The suggestion does not have to result in a new machine or tool. There are many ideas that apply only to improved methods of using existing equipment. We want, too, ways of reducing non-production time. We are also interested in applying long-established practices to operations considered in a class by themselves."

Graded Suggestions

QUESTION: Any practical purpose served by grading suggestions from employees?

ANSWER: Yes; one firm reports that its suggestions automatically fall into three main classifications, from a selectivity standpoint.

Adopted suggestions have such subdivisions as—(1) of definite value for immediate use. 2. Worthy of being pigeonholed for future use.

'Twixt and 'tween suggestions (to meritable to be rejected, yet not up to par) range from (1) being too original in concept, to (2) showing thought and care, even if impracticable), to (3) might make the grade if the worker were given a chance to show HOW the suggestion would accomplish what he promises.

Out-and-out rejected suggestions, composing the third classification. No salvage possibilities here.

Sponsors of suggestions falling within the second classification should be offered every possible encouragement, by letter or in person, to try again.

Periodic Winners Cause Jealousy

QUESTION: Certain of our employees seem to win the awards all the time. It looks like favoritism to our other employees. We are fair enough in the awards, made for really worth-while suggestions.

ANSWER: You appear to have valuable executive timber in your own back yard without realizing it. These employees should be promoted—and promoted fast and often. This would be a honest-to-goodness reward for their *continued* thinking in the company's best interests. As executives, they would, without awards, be expected to further think and plan, leaving a clear field for the operation of the suggestions scheme among those employees BELOW executive levels.

Can One-Timers Be Cured?

QUESTION: How can we cure the one-timers—those who hit the target with the first idea—and then rest on their laurels?

ANSWER: The circumstance is the employee, who, for years, may have nourished a certain practical idea. He unloads it directly, a suggestions plan starts. Beyond that one idea his imagination is barren, unless stimulated.

Apparent need is to make such employees more observant, more watchful. Monetary reward is not the only inducement. One firm sponsors a FIVE CLUB, membership in which is open to employees who have contributed five accepted suggestions while employed. At present there are five members—four men

(Please turn to Page 60)

For *Easier, Faster* Bottle Washing

It's easy to get bottles glistening-bright and sterile-clean with SOLVAY ANCHOR ALKALI. This time-saving, efficient cleanser makes your bottles gleam with cleanliness *with less effort*. SOLVAY ANCHOR ALKALI is economical, too, because the consumption per unit number of bottles washed is extremely low. To make bottle washing easier and faster —get SOLVAY ANCHOR ALKALI.

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Efficient can washing is the result of properly operating equipment plus a good can washing compound. There are a number of materials especially developed for can washing, selection of which is dependent on water hardness and other factors. See text for details.

Bright, clean milk cans are a goal sought by every dairyman. How they can be kept that way is shown by this before and after photo. Bottom half of the can was washed with a special can-conditioning material. Daily washing with suitable alkaline cleaner and conditioning two or three days per month keeps cans bright and shining.

MILK CANS *and* HARD WATER

Reprinted from Oakite News,
RUDOLPH L. FISKE, *Editor*

THE WASHING OF MILK or cream cans, an important operation from the standpoints of sanitation and appearance, is a big problem to dairy plant operators because of the human element involved, mechanical operating conditions and, frequently, inadequate washing materials. Even when a good cleaning compound is employed in a perfectly operating can washer, there is a chance that some deposits of scale or soil will be left on surfaces due to the carelessness of an operator or his inability to control accurately, the temperature or concentration of the detergent solution.

Hard Water Adds to Difficulties

All these difficulties are magnified and made more serious if the can washing is done in areas of hard water. Naturally, water supplies vary in hardness, depending upon their locale – some being low and others high – and water of five or more grains can usually be considered to be on the hard side. In hard water areas, it is quite a problem to be able to turn out clean, sweet smelling milk or cream cans. Unless special precautions are taken, an accumulation of scale and milkstone will gradually begin to build up on machines and in the cans themselves. This scale or milkstone is a combination of calcium salts, magnesium salts or soaps and milk solids, proteins, minerals and fat. At first they may form on surfaces as thin, invisible films which later become minute specks and eventually grow into larger scale deposits as time goes on. The temperatures used in washing, rinsing and sterilizing, tend to bake the milkstone on the cans and machine surfaces, forming an extremely tenacious deposit.

It is most important that these milkstone deposits be removed for, using conventional can washing procedures, it is impossible to properly sterilize a surface that is coated with milkstone. These encrusted deposits not only make an excellent breeding place for bacteria, but also protect and insulate them from the heat of sterilization. Bacteria of milkstone origin are dangerous for two reasons—first because they multiply rapidly and secondly because of their marked resistance to heat. While the less hearty types of bacteria may be destroyed during repeated high temperature cleaning and sterilization, certain forms may live on and find their way into regular milk supplies. These milkstone deposits are also harmful for other reasons. As they accumulate, they increase the friction between moving machine parts and thus tend to shorten the life of the equipment. In addition, they may attack the tinned surfaces of milk cans and the galvanized steel surfaces of machines.

Two Steps Required

There are two steps to be taken to remedy scaled up machines and milk cans. First, the machine itself should be properly descaled and secondly, the cans should be thoroughly conditioned either by running them through a special type of solution in the can washing machine, or by manual methods. A badly scaled can washing machine should be treated with a solution containing 10% to 25% by volume of a special, inhibited acid type material. Trip levers are tied back and the solution circulated until all of the deposits have been removed. Then the drain valve of the tank is opened immediately and the interior of the machine is rinsed thoroughly with a hose, while the solution is draining off.

When draining is complete, the machine is refilled with water, the operator hose-rinsing the interior while this is being done. A solution of the regular can washing material is added to the tanks to neutralize any possible remaining traces of acidity. The neutralizing solution should be heated and circulated for at least one-half hour, but preferably for one hour or longer. Finally the machine is drained and allowed to stand without

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SIX CANS PER MINUTE FOR ANY DAIRY . . .
The Stoelting Straightway Washer is engineered for increased economy in lower water cost, greater efficiency in every operation and longer life. Every feature you'd expect to find in washers costing far more money you will find in the Stoelting Washer and yet the Stoelting Washer is the lowest priced of all comparable washers on the market. The Stoelting is the only machine that washes every size of can equally well regardless of the size of the can. Cans and covers receive four thorough washings and emerge together with cover on can to protect the sterile interior. Other exclusive features.

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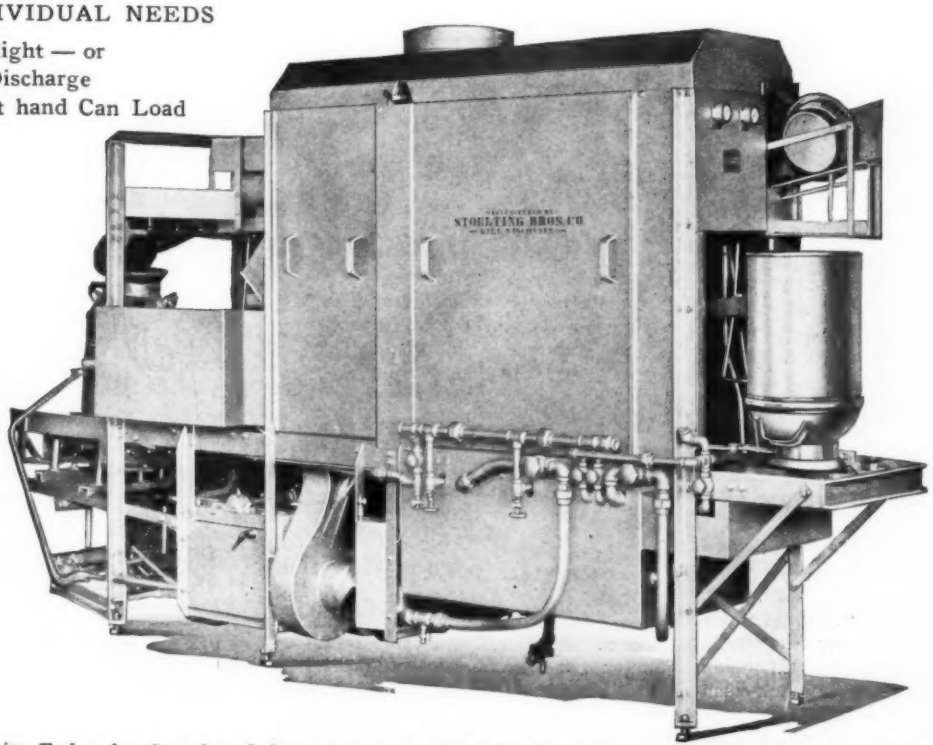
Left Angle Discharge
Right or Left hand Can Load



Write Today for Complete Information 4 cpm Left Hand Can Load — Right Angle Discharge Shown

STOELTING BROTHERS CO. KIEL WISCONSIN

rinsing, until it is to be recharged with the alkaline can washing solution.

Condition Cans in Machine

The simplest way to condition milk cans is to charge the can washing machine with a good milkstone removing material. All the cans should be run through a 2 to 4 ounce per gallon solution of this material for 2 or 3 consecutive days, care being taken to rinse and neutralize the can washing machine at the end of each day's run in order to avoid rusting.

There is on the market a non-toxic, acidic type product which was designed especially for the removal of light rust, scale and milkstone deposits. When used on cans, it not only removes scale formations but also brightens the surfaces. Cans that do not respond to this treatment and fail to show a decided improvement after two or three days run should be segregated from the rest and cleaned manually with a stiff bristle brush and one of the scale removing compounds. These cans should be soaked, scrubbed and then thoroughly rinsed by passing them through the machine ot take advantage of the heavy pressures from the rinse jets and the inverted positions of the cans. This procedure will clean the exterior surfaces as well as the interior.

Once the machine and the cans have been returned to proper condition, it is good practice to set up a program for conditioning both the machine and the cans at definite intervals. This period may be twice a month or once every two months, depending on the hardness of the local water supply. This two to three day treatment will help to keep the cans bright and rust free, uncover open seams, aid in keeping the machine clean and assist in efficient washing and rinsing by keeping the spray jets open. By following this procedure regularly, labor and materials used in the special treatment of milk cans and frequent cleaning of plugged up spray jets, etc., are eliminated.

While it probably is impossible to prevent all formations of scale and milkstone, the condition can certainly be minimized by using the correct kind of alkaline can washing compound. This type of material should have a proper balance of correct alkalies to assist in the removal of fat, proteins and mineral salts and to lubricate moving machine parts. It must be non-corrosive but still contain enough alkalinity to do a thorough cleaning job. It should have water softening or sequestering abilities to retard, to as great a degree as possible, the formation of milkstone. It should contain agents to wet, penetrate and help loosen soils and carry them away in suspension. It should be free rinsing, have long solution life and be economical from a price standpoint.

Noted Economist Predicts 13% Business Increase in '49

Accurate '47 and '48 Estimates by F. D. Newbury Give Weight to His '49 Figures in Spite of Nationwide Decline Expressed by Other Leading Experts

BUSINESS WILL continue to boom in 1949, at a level topping the record year of 1948, according to Frank D. Newbury, dean of economists in industry.

Mr. Newbury, consulting economist for Westinghouse Electric Corp., predicts a gross national product of $260 billion for 1949—up $35 billion over 1948—in a copyrighted article published in *Industrial Marketing*, national business paper of industrial sales and advertising.

Mr. Newbury's forecast is based on the same technique he applied in correctly forecasting record business in 1947 and 1948—at a time that other economists in government and industry were warning of impending depression.

Describing forecasting as "the art of drawing adequate conclusions from inadequate information," Mr. Newbury warns against basing major decisions on "almost whimsical appraisals of the business outlook. . .on pure guesswork, the Dow-Jones averages, or the latest (and most pessimistic) Washington letter."

Mr. Newbury's own technique, reduced to its simplest terms, is based on the important relationship between total investment spending and total national production. But, while the initiating effect of investment on business activity is generally recognized, what is possibly new in the Newbury procedure is the grouping of government expenditures of an investment nature with the more familiar investment expenditures of private business. Total investment is the key to total product, according to this theory, the ratio being roughly that of $20 to $100.

In support of this contention, Mr. Newbury says, "During peaceful, prosperous years there is a fairly constant ratio of total investment expenditures to total national production of about 20%. In 1929 with gross national product of about $100 billion, total investment amounted to $20 billion. In 1947, with gross national product of $231 billion, total investment was $50 billion. At the bottom of the long depression—in 1932—national product dropped to $58 billion and total investment dropped much more to about $5 billion. So, over this wide range from prosperity to depression, and with the war and post-war growth investment expenditures have been a dependable guide to total business activity."

Thus is it implicit in Mr. Newbury's system that, to predict gross national product for 1949, he must first predict total investment. He admits this is "a hazardous undertaking, and the result can only be an educated guess," but goes on to discuss the investment factors which enter into his consideration:

"It is evident from the figures for the last two years that construction and producers' durable equipment were still in their active expansion phases in 1948. Also, experience tells us that both of these cycles have long periods, and, characteristically, their annual values do not change suddenly from expansion to contraction. Their cycles show well-rounded tops. Consequently it is a reasonable estimate that the increase for both these industries will continue for at least another year.

"Inventory accumulation is expected to continue in 1949, but only at the relatively small figure of $1 billion. Net foreign investment is expected to continue at the same figure as in 1948—about $2 billion. Investment in construction is expected to be $15 billion. Investment in producers' durable equipment is expected to be $21 billion. Thus total private investment should run to a total of $39 billion."

Mr. Newbury then looks to the foreign situation, takes into account the freer-spending philosophy that may be expected of the incoming Democratic administration, and pegs government investment for 1949 at $20 billion—making a total national investment of $59 billion.

"Having thus arrived at this estimate of total investment expenditures, we are ready to translate investment spending," he continues, "into an estimate of business activity.

"In 1947, $50 billions of investment corresponded with $231 billions of gross national product—the market value of total national production of all kinds of goods and services. In 1948, $56.5 billions of investment increased gross na-

(Please turn to Page 69)

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(Photo 1)
- Compak Weigh Can and Receiving Vat: Rock Gate Farm Dairy, Mt. Kisco, N. Y.

(Photo 2)
- Combine Weigh Can: 500-750 and 1000 lb. capacity

(Photo 3)
- Compak Weigh Can: 450 lb. capacity

(Photo 4)
- Hi-Grade Receiving Vat: 1000-1250-1500 and 2000 lb. capacity

(Photo 5)
- Hi-Grade Weigh Can: 500-750 and 1000 lb. capacity

(Photo 6)
- Double Compartment Weigh Can: 1000-1500 and 2000 lb. capacity

(Photo 7)
- Hi-Grade "B" Receiving Vat: Three Models, four sizes of each: 1000-1250-1500 and 2000 lb. capacity

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A Letter to the Editor—

Alfred A. Brown, Research Professor of Agricultural Economics at the University of Massachusetts, is not a stranger to the American Milk Review. His thought-provoking article, "The Place For Leadership", was a penetrating analysis of the larger issues confronting the industry.

In this letter to the Editor, Professor Brown takes issue with the article "Less Regulation, More Cooperation" by Mac D. Levin which appeared in the December number of this magazine.

Dear Mr. Myrick:

A recent issue—December 1948—of your *American Milk Review* carried an article titled "Less Regulation, More Cooperation". There must have been more than a few cheers at that masthead. The proposition has lots of "s-a"—sense appeal. Even the folks who do the regulating could go for that Few people enjoy its constant headaches, as Mr. Forrest of the Dairy Branch emphasized at the meeting of the Association.

There are at least two general aspects of Mr. Levin's article on which comment might well be made. In the first instance, the main proposition—that regulation creates a gulf between producer and dealer—needs to be more fully substantiated. In the second instance, there are a few statements that are either errors which may be pardonable or elements of misinformation which should not go unchallenged. The references to Federal Order No. 27, under which the New York market is regulated, do not add to our understanding on the first point. The comments on the Boston Formula and the forces motivating dairy farmers lead to the pitfalls of the second.

I am not sufficiently familiar with Order No. 27 and its amendments to know off-hand whether the contentions made in the article will stand. The author of the article is not alone in wondering about the need for so many classifications for milk. I suspect that they reflect two things: first, the complex nature of the dairy industry in the New York area; and secondly, a perversion of the social philosophy on which control is based. On the second point it might be noted that the proper balancing of many related items in the interest of stability could also be directed by interested parties into channels which hopefully guarantee a profit on each operation. This point like the stated major premise in the article needs to be more adequately developed.

The shortcomings of Federal Orders regulating milk markets is apparently a matter of concern to the Administrators and rightly so. They, better than any, should be aware of the loopholes, the needless restriction, and the chronic star performers. The steps which they have taken—albeit in a follow-the-leader fashion—to set up price committees may develop in a sound policy of periodic, if not constant critical appraisal of a democratic institution.

The Boston Formula, which is a product of one of these committees, needs to be studied thoroughly to be fully appreciated. It is not perfect even though some of the publicity tendered it might suggest that. So far as I am concerned, the really significant feature of the Formula has received relatively little attention. In view of the history of milk marketing, one might regard the mechanics of the Formula as a logical approach, so why the fuss? Since human beings cannot always be relied upon to do as the logic of a situation reveals, the remarkable thing is that among the group involved the Formula received so near unanimous support. In view of this harmony one might well ask—How has the Gulf been affected?

The Boston Formula was developed by a committee of economists and although I was not on the committee, and those who were on it are quite able to speak for themselves, the committee did consider RELATED ITEMS—many of them. And from the various items considered, those best adapted to the job were selected. There is no joker in the Formula.

One might question the assumption that the Federal Reserve Index of department store sales in Boston is an adequate measure of consumer purchasing power; one might question the failure to give weight to values of competitive products but the claims made by Mr. Levin are incorrect.

Mr. Levin's portrayal of the dairy farmer is also considerably less than quite right. Among dairymen too, there are able spokesmen. But there are a few generalizations that might be repeated.

Dairying is characterized by one of the paradoxes of agriculture. Expansion is not difficult; contraction produces cramps. In the early thirties when milk prices were tumbling, dairymen did not cut back in production. It was this inability to cut back that served as part of the argument for public control. Full cooperation then might have done the task; that is, stabilize the markets. Cooperation today could lead the way towards a reduction in the amount of governmental regulaton to which we are all subject. Cooperation is a rigid discipline. It should not be thought of too indiscriminately.

Sincerely yours,

Alfred A. Brown, *Professor*

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D.I.

ROY BRYNGELSON

Portrait of a Dairyman

By **JOHN BURNHAM**

North Dakota Dairy Industries Association

ROY BRYNGELSON has a mixed reputation among his colleagues. Some of them consider him too candid, some of them think he's ruthless in his criticism, some of them think he's a nagging old woman where quality is concerned.

But all of them, dairy plant colleagues in the industry and farmer-patrons of the Barnes County Co-operative Creamery, agree that the creamery's manager is a leader in the industry, a leader in a dozen projects designed to improve the dairy industry in North Dakota. And never has his sincerity and integrity been questioned.

Roy Bryngelson was born and raised on a Minnesota dairy farm. He worked in a southern Minnesota business house one year after which, in 1931, he was hired as bookkeeper of the Barnes County Co-operative Creamery in Valley City, N. D. Anyone who recalls those days, and what they meant to agriculture, will agree that this was not an auspicious beginning.

Roy helped out in the plant during the day, which left most of the bookkeeping work until evening. That worked out fine, though, for the creamery was open evenings and Roy, working on his books until midnight, could wait on customers and wrestle cans as a break in the mathematical routine.

He roomed nearby, which made it handy in the mornings, since he was down to work at 6 a.m. The salary was $70 per month.

In 1934 Roy Bryngelson was made manager of the creamery. It was a time of dust and depression, when grasshoppers clipped the little greenness which hot, dry weeks had spared in North Dakota. It was the time of farm foreclosures, of the Frazier-Lemke law. Tourists driving on the arrow-straight U. S. Highway 10 from Minnesota to Montana told how grasshoppers clogged their car radiators until the water boiled out, and how the windrow of grasshoppers killed by cars made the highway greasy and treacherous.

North Dakota cattle grew lean and weak on Russian thistles and wheat straw, until a new administration came along and sent federal appraisers who bought them, shooting the weakest and shipping those which could stand the rail trip to South St. Paul stockyards.

Roy Bryngelson weathered all those times, and carried his co-op successfully through those years. This winter he is the same hurried, worried Roy—but he has a confidence gained through 17 years of accomplishment.

(Please turn to Page 69)

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Synthetic Detergents

By **DONALD PRICE, Ph.D.**

Technical Director, Oakite Products, Inc.
New York City

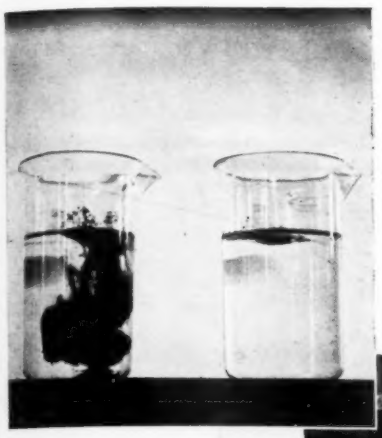
By Special Permission from Oakite News

DR. DONALD PRICE

IF ONE attempts to wash one's hands with plain water, the process is not very successful. A great deal of rubbing and rinsing is needed to make any impression on the dirt and even after much time and effort the hands are probably still not really clean. Now if a small quantity of soap is added to the water, the results are quite different. As the hands are rubbed together considerable foam is formed, the dirt particles seem to be lifted off the surface of the skin, and any grease or oil present is readily removed. The solution becomes cloudy as the dirt is taken up and suspended in the water. This behavior of soap is charac-

The accompanying illustrations show one of the most important phases of dairy plant functioning. Here are depicted operators engaged in performing the thorough cleaning of equipment which is so vitally essential to the turning out of top quality products of every type in the milk and milk products field.

nts — an Explanation



What a minute amount of wetting agent will do. Beaker at right contains plain water—the one at the left contains water to which .06 of an ounce of wetting agent has been added. An equal quantity of lampblack was placed in each beaker. Within four seconds, action of wetting agent in beaker at left caused lampblack to precipitate. It floated on surface of other container for two hours before sinking.

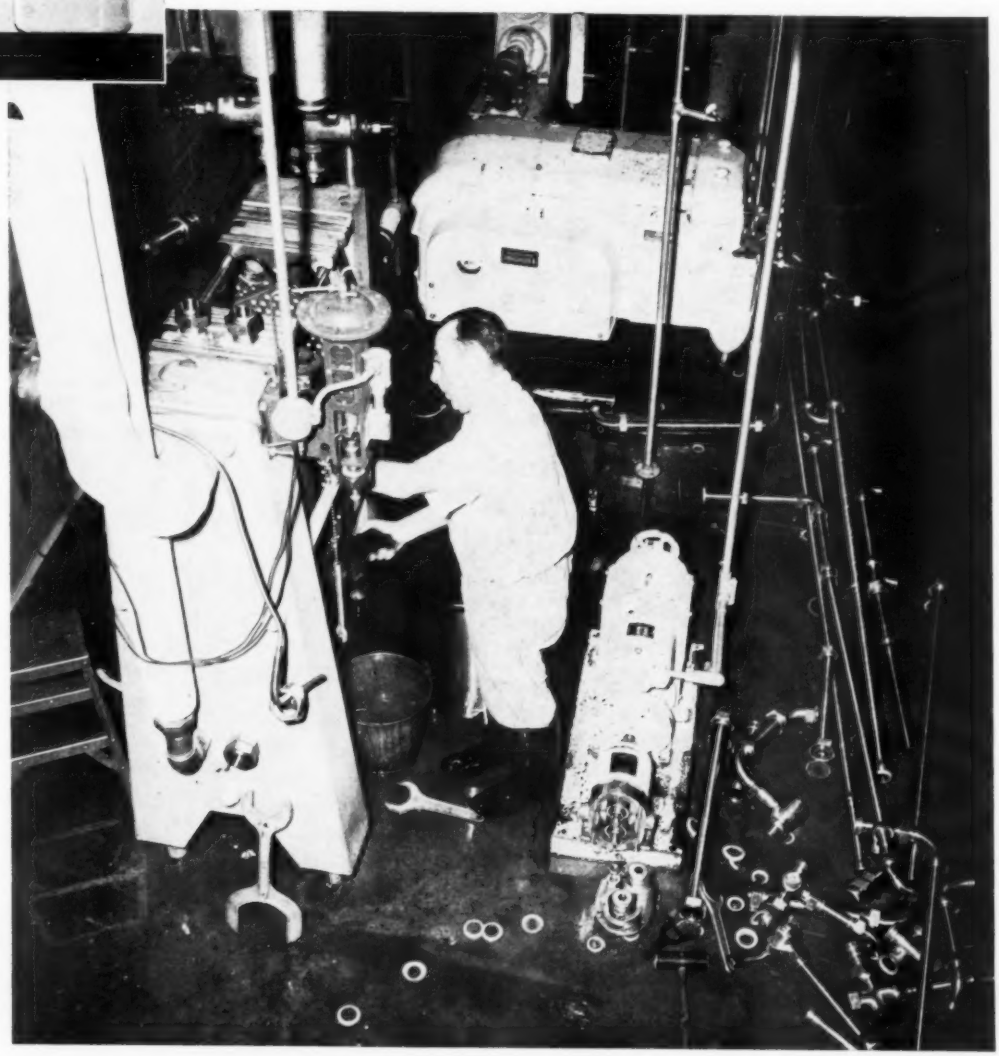
teristic of the materials we call detergents, of which soap is the oldest and still by far the most widely used.

Disadvantages of Soap

In spite of its effectiveness and wide acceptance throughout the world as a cleansing agent, soap suffers from some serious disadvantages. In so-called hard water which contains dissolved salts of calcium and magnesium, its cleaning power is greatly reduced. Persons living in hard water areas are only too familiar with the absence of foam and of the sticky curd-like substances which form when ordinary soap is used.

These curds are produced by chemical action between the dissolved salts and the soap itself, and actually prevent cleansing until a large quantity of the soap is first used up. Moreover, they deposit on the skin, on fabrics or on other articles being washed, from which they are quite difficult to rinse off. The same holds true to an even greater extent if one attempts to use soap in salt water.

In certain industrial processes, it is sometimes necessary to wash fabrics in



These photographs are supplied through the courtesy of The Rock Gate Farm Dairy, of Bedford Hills, New York, and were furnished to the "Review" by Oakite Products, Inc.

They clearly depict some of the major and essential operations in proper sanitary maintenance of every type of equipment.

acidic solutions, as in dyeing textile fabrics with certain classes of dyes. In these cases, soap cannot be used at all as it precipitates out in sticky curds similar to those obtained in hard water and exerts no cleansing action whatever. A further practical disadvantage of soaps lies in the fact that they are made directly from animal and vegetable fats and consequently in times of scarcity tend to come into competition with human food.

As a consequence of the foregoing disadvantages inherent in soaps, chemists some years ago turned their attention toward developing detergents derived from sources other than fats. Their efforts proved highly successful and have resulted in the so-called newer synthetic detergents. These substances are produced or "synthesized" in chemical plants, starting with such raw materials as petroleum, coal tar chemical or by-products such as those of the paper industry, making use of chemical reactions which are often quite complicated.

The synthetics not only lack the drawbacks possessed by soaps but, in many cases, are considerably more efficient cleansing agents than the latter. One often hears them referred to as wetting agents or penetrants because of the capacity of their water solutions to wet surfaces or penetrate complex materials such as textile fabrics almost instantaneously. This rapid wetting and penetration permits the detergent solution to detach the dirt from soiled articles with considerably greater speed and completeness than is the case with the older soaps.

Warning All Ducks

A spectacular demonstration of the effectiveness of wetting agents was given by the technicians of one of the largest manufacturers of these products a few years ago. It consisted of adding a small amount of one of their best wetting agents to a tank of water upon the surface of which a duck was swimming. Almost instantly the duck, much to his dismay, sank in the water up to his neck. This sensational result was, of course, due to the fact that the duck's feathers which are ordinarily kept dry by the presence of a film of oil, were thoroughly wetted by the water, thus greatly increasing the bird's weight.

The synthetic detergents, as they have now come to be called, were first discovered in Germany during World War I through the efforts of German chemists to produce cleansing materials independent of fats which were then so vitally needed for food. They were commercially developed some time after the war, particularly for use in textile processing where the shortcomings of soap are a distinct disadvantage.

About fifteen years ago these products were introduced into the United States and they have since undergone a tremendous growth and development and have spread into a variety of other industries. As early as 1941, Dr. Lenher of the DuPont Company was able to cite several hundred well established industrial uses for synthetic detergents other than in the textile industry. It is clear from what has been said that detergents or wetting agents are not altogether new but in fact have been in use for many years in a number of industrial processes notably in the field of textiles. The reason that so much is heard about them at present is that materials containing these agents are reaching the consumer more and more and that the benefits of their use are being more and more brought home to the general public. The alkalis such as caustic soda, the soluble silicates and various phosphates constitute the third class of cleaning materials, which are of vital importance to industry. Industrial cleaning, where soaps are rarely applicable, is done with suitably balanced mixtures of these substances. The properties of the synthetic detergents, ability to promote rapid wetting and penetration, to suspend dirt particles in water and to emulsify oils, make them highly desirable ingredients in modern industrial cleaners, a fact which was early recognized by progressive cleaning material manufacturers. One may safely say that it would be well-nigh impossible to meet present-day demands for high speed production without scientifically compounded industrial cleaners which provide the required cleaning results through a combination of carefully blended ingredients.

Many examples of the advantages accruing from the use of properly selected detergents or wetting agents as ingredients in industrial cleaners, may be cited. They are used in electrocleaners where they promote rapid wetting and free rinsing and where the risk of "plating out" soaps on the work is obviated. In spray washers used in production cleaning, their rapid wetting out of the dirt, speedy emulsification of the greases and oils permit a larger number of parts to go through the machine at greater speeds. Moreover, the conditions of low foaming and stability in hard water, are also readily met.

Ideal for Dairies, Food Plants

The synthetics have brought about a new era in the dairy and food field where their property of free rinsing avoids the danger of soap films which harbor bacteria. In cases where much hand washing has to be done, their use eliminates the necessity for high pH materials which attack the workers' hands. There is also less attack on bottles because of the free rinsability of the solutions. The use of acidic cleaning materials was made possible by the advent of the synthetic detergents. Through their power to lower surface tension, rapid wetting of scale and penetration of rust is secured, thus promoting its easy removal. The adherence of "smuts" is also prevented.

The characteristics of these new detergents are constantly under study in the research laboratories, especially in connection with their behavior in industrial cleaning processes. This has resulted in improved materials and greater cleaning speeds, thus permititng stepped-up production. The development and use of synthetic detergents has barely begun and the future is likely to see a greatly expanded use of these materials in many fields, with results that may, in some cases, be nothing short of revolutionary.

WISCONSIN PROGRAM

The University of Wisconsin Centennial Year Dairy Manufacturers' Conference sponsored by the Department of Dairy Industry will be held on Tuesday and Wednesday, March 22 and 23.

The program will include the following subjects:

- Fat Free Vitamin Fortified Milk
- Cream Cheese for Retail Distribution
- Tank Truck Hauling of Milk from Farm to Plant
- Milk Powders Tailor Made for Market
- Molds — What They Do — What You Should Do
- Bovine Brucellosis To Date
- Milk Proteins — What Can Be Done
- A Symposium on Current Research
  - In Dairy Industry
  - Dairy Bacteriology
  - Dairy Husbandry
- Milk Fat — A Report on the Status of Oxidized Flavor
- Ion Exchange — A New Tool in the Dairy Industry
- Important Trends to Recognize When Marketing Wisconsin Milk
- Emulsifiers — Nature, Action, Use
- Fat Sampling; Fundamentals
- Fat Testing; New Developments

Programs will be mailed to all Wisconsin dairy plants and equipment and supplies organizations. Individuals desiring a copy of the program are requested to write to the Manufacturers' Conference Committee, Department of Dairy Industry, University of Wisconsin, Madison.

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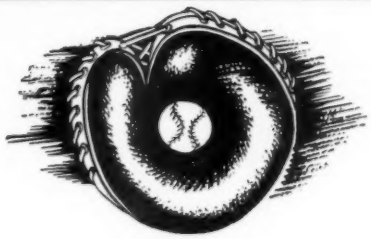

Just as the catcher's mitt flexes to receive and hold the ball, Mono Cups "give" and spring back to hold lids with a tight, sure grip.

"Horizontal flexibility" in a paper cup makes your filling and capping operations smoother and faster. The exclusive straight edge brim of Continental Mono Cups provides this elasticity.

They have the "give" that helps lids slide unerringly into place. They have the "take" to spring back for a good, tight seat every time.

When you use Mono Cups, you have no problem with containers that may get out of round in handling and storage. Mono Cups flex right back into shape for uninterrupted, jam-free operation.

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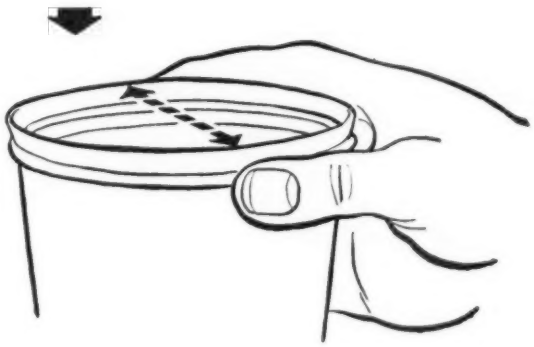

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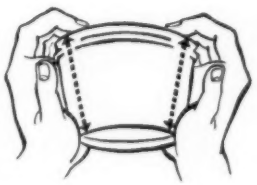

A paper cup requires *vertical sidewall strength* to stand up in filling and capping operations and in delivery. Their straight edge brim gives Mono Cups this strength to spare. You really have to pour on the pressure before they'll break down at the lid seat—the place where ordinary cups are first to fail.

cut labor and over-fill costs as much as 50% with automatic filling and capping

You make bigger profits with a machine operation. Filling and capping cost you less. You eliminate overfilling, almost unavoidable in a hand operation. And you are assured of uniform quality, improved appearance, better consumer acceptance. Here's something you'll want to look into. Check with Continental today!

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THE TRUTH ABOUT PROFITS

(Continued from Page 6)

of any of the other functional groups of expenses. Nearly four-fifths of selling and delivery cost was payroll expense. Salaries, wages and other payroll charges also made up more than three-fifths of the total administrative and other expenses, and about the same share of receiving and processing costs exclusive of milk handling charges.

The percentage of net total expenses represented by payroll expense in 1947 was higher than the 7-year average, yet there was no definite trend in this relationship during the period of the study. Payroll expense was 59.1 percent of the total in 1941 and 59.8 percent in 1946. The lowest percentage, 55.7, occurred in 1945.

The net total expense of the six companies was about 45 percent greater in 1947 than in 1941. How did the various kinds of expense change during the 7-year period? Total payroll expense rose 43 percent and all other expenses (less credits) 47 percent.

Within the group of payroll expenses, it is notable that payroll taxes were reduced (principally by merit-rating credits on New York State unemployment insurance) while expenditures for compensation and group insurance were increased.

All payroll expenses were nearly 15 million dollars greater in 1947 than in 1941 and this was more than half the total amount of increase in all expenses. Other leading items of increased expenses were freight and hauling, milk handling charges, repairs and maintenance, and bottles, caps and containers. The increases on these items totaled about two-thirds of all increases in expenses other than payroll.

The increase in milk handling charges paid others indicates a greater dependence upon outside sources such as cooperative plants, affiliated company plants and others for a milk supply, as well as increased rates paid for handling and shipping such milk.

Much of the increase in bottle and container expense was caused by two significant technological changes. One of these was the replacement of round bottles by the lighter-weight square bottles. Probably more important than this was a marked increase in use of paper containers. In April and May 1948 about half again as many quart containers were used by these companies as in April and May 1942. The use of half-pint containers was stepped up even more, about three times as many being used in April and May 1948 as in the comparable period of 1942.

Under favorable conditions the use of paper containers brings economies in plant operation and delivery, but the price of a single-service container is several times the cost per trip of a returnable bottle.

Expenses for repairs and maintenance were high in 1947 partly for the reason that normal replacements of plant and equipment had not been possible during the war. On the other hand, charges for depreciation were reduced because much equipment became fully depreciated and also because some unused properties were sold.

Payments for rent as well as for taxes and licenses were less in 1947 than in 1941. All property expenses rose from 6.7 million dollars in 1941 to 8.2 million dollars in 1947, an increase of 22 percent.

The charges for bad debts were much less in 1947 than in 1941. It is always easier to collect bills during prosperous times.

Increases in Wage Rates, Service Charges, and Prices of Supplies and Equipment

The general rise in commodity prices and wages has been accompanied by varying increases in practically all wages, service rates, and prices of supplies and equipment purchased by milk dealers.

During the period May 1941 to May 1947, wage rates for different groups of milk company employees were raised 31 to 75 percent. The largest increases went to the workers in country plants, whose alternative opportunities were greatly improved by the industrial expansion that took place during the war. During the longer period, May 1940 to September 1948, the increases in wage rates of different groups ranged from 51 percent to 100 percent. Further significant increases in wage rates of dairy employees were negotiated in the fall of 1948 and became effective in October of that year.

These comparisons of wage rates are based on hourly wages and do not reflect accurately the weekly or annual income of the workers. During the period, the number of hours worked per week was reduced in most instances. On the other hand, many dairy employees have benefited from overtime pay, and commissions paid routemen have increased. The increase in commissions resulted from higher prices of products sold, and also from delivery of larger loads. The latter came about in part because of greater consumption of milk, but to a greater extent through adoption of every-other-day delivery and other economical delivery practices.

City water and electric power are practically the only items of expense on which the rates or prices were not raised between 1941 and 1947. Freight rates, by rail, were 25 percent higher in 1947 than in 1941 while trucking charges rose about one-third. By September 1948, railroad freight rates had increased 50 percent and trucking charges 40 percent over the prewar rates.

Among the various items of supplies required by milk companies, milk bottles, milk cans and washing powder increased least (only 10 percent) during the years covered by this study. Prices of many other items, including bottle caps, coal, motor oil, tires and paint rose about 25 to 50 percent during the period. The price of fuel oil rose 60 percent, while overalls supplied for the use of employees more than doubled in price.

Price advances on most kinds of supplies were even greater during the period May 1940 to September 1948 than during the seven years covered by the study. Tubes for auto and truck tires are an exception, being cheaper in 1948 than in 1947.

Prices of milk-plant and transportation equipment have risen in about the same degree as the prices of supplies, i. e., from 5 to 10 percent on some items to as much as 100 percent or more on others.

Taxes on Income

Like other corporations, the milk companies represented in this study were subject to federal income taxes and to excess profits taxes when applicable. In addition they had to pay franchise taxes to the state of New York based on that portion of their income derived from business done in this state. In this report the combined amounts of these taxes are shown separately from other expenses because they fluctuate directly with the amount of profit before such taxes.

In 1946 and 1947, after the excess profits taxes were discontinued, all the companies represented in this study were subject to the same tax rates, namely a New York state tax of 4.5 percent of their net income, plus a federal tax of 38 percent on the balance of net income after paying the state tax. Thus the combined federal and state taxes for those years were 40.8 percent of the companies' net income before provision for such taxes. During the years when excess profits taxes were in effect the taxes varied as between companies, but the combined rates were much higher than at present.

The combined average rate of federal and state taxes on income as determined in this study for each of the years 1941-1947 was as follows:

1941	58.1	percent
1942	*1/*	"
1943	52.9	"
1944	62.8	"
1945	64.4	"
1946	41.8	"
1947	40.1	"

The federal taxes on income of the four smaller companies in the group, as used in this report, are the amounts actually paid, except for minor adjustments.

As to the two larger companies, however, the profits were taxed in combination with the profits of the other subsidiaries and divisions of parent companies. The combined profits of each of these consolidated groups were subject to federal excess profits taxes in the years when such taxes were applicable in addition to the normal income tax and surtax. The aggregate amount of the normal taxes, surtaxes, and excess profits taxes for each year, as paid by each of the two parent companies, was compared with, the company's taxable income and an average or effective rate of tax was determined. The effective rate for each parent company then was applied to the taxable income of those of its subsidiary units, which were represented in this study.

1/ In 1942 the combined federal and state taxes on income amounted to $399,200 even though the six companies as a group had a loss of $803,000 before provision for such taxes. The reason for this apparent contradiction is that some companies in the group had profits that year and were subject to taxes on income.

If these subsidiary units, i. e., the Borden and Sheffield Companies, had been taxed as separate entities it is probable that the amount of excess profits taxes applicable to them would have been smaller since their rate of return on invested capital was comparatively low.

Earnings

In the preceding sections of this report the net profit or earnings of the six milk companies have been shown in millions of dollars and in cents per dollar of sales, as well as in cents per quart and per hundredweight of milk. Business profits or earnings may also be expressed in terms of an annual rate on the invested capital.

The net profits of the six milk companies as determined in this study for the seven years 1941-1947 were equivalent to 3.4 percent of their adjusted net assets or owners' investment. In different years (excepting 1942) the rate of return varied from .7 percent to 7.6 percent, as shown below: 2/

1941	.7	percent
1942	(2.6)	percent (loss)
1943	3.4	"
1944	5.7	"
1945	5.4	"
1946	7.6	"
1947	4.0	"
12-months periods ended June 30,		
1947	5.8	"
1948	5.5	"
7-year average 1941-1947	3.4	"

The rate earned on the investment was lower for the year 1947 than for either of the 12-months periods ended June 30, 1947, and June 30, 1948. This is due to the fact that the earnings were much lower in the first half of 1947 than in either the latter half of 1946 or the first half of 1948.

Comparison of Milk Company Profits With Those of Other Groups

One way of judging whether the profits of any group of companies are reasonable or excessive is to compare them with the profits of other groups. This can be done either on the basis of profit per dollar of sales or in terms of an annual rate of return on invested capital.

2/ In a period of inflation, profits expressed as an annual return on investment tend to be exaggerated. This is true because the investment (at book value) does not increase as rapidly as commodity prices. A given rate of return decreases in purchasing power as prices rise.

In this study the seven-year profit rate per dollar of sales for the six milk companies represented in this study is compared with the profit rates of a number of other corporate groups computed on a similar basis.

Each of the eleven different groups of companies enjoyed higher profits per dollar of sales than did the six milk companies. Meat packing companies, chain food stores and dairy products companies had relatively low profits, not exceeding 2.5 cents per dollar of sales. A large number of companies engaged in merchandising and other trading operations earned 3.2 cents per dollar of sales, while manufacturing companies averaged as much as 5 cents. Several groups did even better than this.

The profits of different groups of companies were compared on the basis of the percentage return on invested capital. Here again the six milk companies represented in this study fared more poorly than any of the other industrial groups. As stated previously, during the seven years 1941-1947 the six milk companies earned 3.4 percent a year on their net assets exclusive of any good will value. The average for all groups of companies whose figures were available for comparison was 9.1 percent. A large number of trading companies earned an average of 13.2 percent on their net assets, and manufacturing companies 11.5 percent.

Recently the Bureau of Agricultural Economics of the U. S. Department of Agriculture issued a report on the earnings of 43 food companies. During the seven years 1941-1947 these companies had net earnings equivalent to an annual rate of 9.5 percent of their net assets. In each of the seven years the return on investment of the six New York milk companies was substantially lower than that realized by the 43 food companies.

As explained elsewhere in the report, three of the six milk companies represented in this study are affiliated with larger organizations operating either regionally or nationally. The parent companies are The Borden Company, National Dairy Products Corporation and Philadelphia Dairy Products Company. In 1947 the combined earnings of the three companies mentioned made up about three-fourths of the total net income of the thirteen companies.

Sometimes the profits reported by the parent companies are cited as evidence of profitable operations on the part of their subsidiary units that distribute milk in the New York market. There is, of course, no direct relationship between the profits or losses of these subsidiary units and the profits or losses of the parent companies. Profits in one market may be offset by losses in another, just as losses on fluid milk operations may be offset by profits on cheese, ice cream, milk powder, instant coffee or salad dressing, or the reverse.

Without revealing confidential figures for any company in the group whose records were used in this study, it can be said that in 1947 the combined net sales of the subsidiary units of the three parent companies fell in the range of 10 to 15 percent of the parent companies' sales. In contrast to this, the combined net profits of the New York subsidiaries fell in the range of 2.5 to 5 percent of the profits of the parent companies.

Invested Capital

The book value of all assets used in the business of the six milk companies represented in this study at the end of 1947 was 82 million dollars. Nearly 30 percent of this amount was in the form of current assets such as cash, accounts receivable, and inventories. Fixed assets (land, buildings, and equipment) made up nearly half of the total investment. Most of the remaining quarter of the total assets consisted of deposits with a parent company, and good will value.

From the beginning of 1941 to the beginning of 1948 the book value of all properties and other assets used by the six companies increased 7.5 million dollars, or 10 percent. The principal increases were in current assets and deposits. The book value of fixed assets was 17 percent lower at the end of the seven-year period than at the beginning.

Of the total capital employed in the business of these six companies a little more than three-fifths belonged to the stock holders. Nearly all the remainder consisted of current liabilities, which increased from a bit less than 10 million dollars at the beginning of the period to slightly more than 17 million dollars at the end. The owners' equity remained practically unchanged.

Interesting changes are observed when the amounts of the several asset items are traced throughout the period, from the beginning of 1941 to June 1948. The

book value of land, buildings, and equipment (exclusive of reserves for depreciation) fell from 42.9 million dollars at the beginning of 1941 to 32.2 million dollars at the beginning of 1946, a decrease of 10.7 million dollars. This remarkable decline in book value of fixed assets was due in part to the disposal of certain unused property and equipment and to the inability of the companies to make normal replacements because of war conditions. During this five-year period the reserves for depreciation *increased 4.2 million dollars.*

As soon as the necessary materials became available after the war these companies began to replace worn-out and obsolete equipment and to undertake certain remodeling and improvements of buildings which appeared necessary in order to maintain quality standards, to comply with health department and other regulations, or to economize in operating costs. By June 30, 1948 the book value of fixed assets had risen to 36.4 million dollars, a gain of 4.2 million dollars since the beginning of 1946.

The net changes in asset values of different kinds of property during this post-war period, December 31, 1945 to June 30, 1948, were as follows:

Buildings and building equipment	increase	8.7 %
Plant equipment, etc.	"	20.3 %
Autos, trucks, wagons, horses, etc.	"	37.6 %
Furniture and fixtures	"	20.7 %
Bottles, cases, cans, paper containers	"	56.0 %
Tank cars and tank trucks	decrease	13.2 %
Dairy herds	"	26.6 %

Capital Turnover

The rate of turnover of capital increased during the period covered by the study. In 1941 the net sales were 1.8 times the total assets at the beginning of that year, while in 1947 the ratio was 2.7 to 1. As an average for the seven years, sales were 2.2 times the total assets.

Since the adjusted net assets (net investment of the owners of the business) were much less than the total assets, the turnover on this basis was greater. During the seven years the sales increased from 2.7 times to 4.6 times the amount of adjusted net assets. As an average for the seven years, the annual sales were equivalent to 3.6 times the adjusted net assets.

Significance of the Findings

The most striking fact revealed by this seven-year study is the low rate of earnings of the six leading milk companies in the New York market. Whether expressed in cents per dollar of sales or as a return on the capital invested in the business, the profits of these companies were smaller than those of other business groups.

Earnings of the New York milk companies during the seven years 1941-1947 were at the rate of one cent per dollar of sales or 3.4 percent a year on the owners' investment. During the twelve months ended June 30, 1948, these companies handled slightly more than one billion quarts of milk (including the milk equivalent of cream and other products) and their net profit on this large volume of business was at the rate of one-fourth cent a quart.

These findings point to an inescapable conclusion and suggest a question that concerns the public as well as the companies directly involved. The conclusion is that consumers can hope for no reduction in the price of milk, nor can producers expect any increase in returns through further curtailment of dealers' profits in the New York market.

The question is whether the competitive position of the large milk companies is now threatened by conditions which were non-existent during the period of their growth and expansion prior to World War II. Why the companies whose records have been analyzed in this study failed to earn a normal rate on either their sales or their investment during this period of exceptional prosperity for industry in general (and seemingly for many of the smaller milk companies) is difficult to explain. Among the factors that may be responsible are the changing character of the business, especially the trend away from home delivery and toward store distribution; difficulties experienced in dealing wth labor unions and in labor management (which appear greater for large companies than for smaller ones); and the vulnerability of large milk distributors to political attacks and unfavorable publicity. How serious each of these problems is and how they are all to be solved are questions that cannot be answered from the findings of this study.

But one fact is clear—if the spread between what the farmer gets and what the consumer pays is to be narrowed, this must be done either by further curtailment of distribution services or by increasing the efficiency of the services performed. Above all, since labor costs make up nearly three-fifths of all milk distribution costs and show a persistent tendency to rise, constant and intensive efforts must be made to increase the output per hour of work.

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NEW SALES HEAD

Ross J. Winning has been appointed general sales manager of Sheffield Farms Company, Inc., F. J. Andre, president, has announced. Mr. Winning is a director of Sheffield Farms and was formerly city production manager for the company. He has had an extensive background of experience in fluid milk and milk products organizations.

VISUAL FILING LESSON

"It Must Be Somewhere!", a new, color motion picture portraying the vital importance of simplified, efficient filing methods in business, has just been released by the Systems Division of Remington Rand. This film is an effective dramatized report on simplified records management.

Featuring a fast-paced script, sparkling acting and dialogue rendered by professionals, settings photographed in full color, and expert direction, "It Must Be Somewhere!" was produced by one of America's leading industrial film organizations.

Starting point of this entertaining and informative action-drama, is the discovery by an executive that an important paper which should be in the files cannot be located. The delay in producing this paper almost results in the loss of a valuable customer. The film then takes the harried executive and his equally harassed office staff through a series of episodes that dramatize the crucial significance of modern, simplified records operation.

The story of "It Must Be Somewhere!" highlights the means of attacking a problem of paramount interest to most business executives today—how the squeeze on business profits by mounting costs may be offset by increased efficiency in office operation.

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STANGE CO. BANQUET

The Wm. J. Stange Co., Chicago, manufacturer of food seasonings, colors, preservatives and allied food products, celebrated its 15th consecutive bonus payment to employees at its annual employees banquet held at the Graemere Hotel late in December.

The total of $23,460 in bonus checks handed out to 107 office and plant employees by Wm. B. Durling, president, marked the largest bonus payment in the company's 44 year history.

Calling 1948 a "most significant year" in Stange's broad expansion program, Mr. Durling pointed out these highlights:

Largest sales volume in the company's 44 years of operation.

Opening of a West Coast Manufacturing Branch at Oakland, California to provide improved service to food processors of that region.

Purchase of the modern building at 342 N. Western Ave., Chicago, in which general offices and seasoning manufacture are housed.

Remodeling of the two plants at 2536 W. Monroe Street and 2549 W. Madison St., permitting a step-up in the manufacture of Peacock Brand Certified Food Color, N.D.G.A. Antioxidant and spice percolation.

You'll Find True Economy
WITH
SHARPLES
Presur-Seald
CREAM SEPARATORS
and MILK CLARIFIERS
A large number of Sharples Presur-Seald Cream Separators and Milk Clarifiers have now been in use for sufficiently long periods to amply demonstrate that the efficiency, endurance and operating economy which Sharples has engineered into them pays real dividends to the owner.
Sharples realizes that it is not enough to provide completely corrosion resistant separators and clarifiers which have every desired sanitary feature. Such machines must also be attractive from the economy viewpoint.
That is the reason for Sharples' oversize bowls . . . for its non-slip direct motor drive . . . for its long-wearing inlet and outlet seals and nozzles . . . for its completely enclosed motor . . . for its enduring method of bowl balancing . . . and for its numerous other advances, including some which, although improving sanitation, also insure that Presur-Seald Separators and Clarifiers will stay new longer.
The SHARPLES CORPORATION
Presur-Seald SEPARATORS and CLARIFIERS
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EXECUTIVE OFFICES AND FACTORY, 2300 WESTMORELAND ST., PHILADELPHIA 40, PA.
New York 17, N.Y. 501 Fifth Avenue
Chicago 4, Ill. 80 Jackson Boulevard
Boston 10, Mass. 230 Congress Street
San Francisco 5, Cal. 686 Howard Street
Cleveland 15, Ohio 453 Hippodrome Annex Bldg.

DR. ROBERT F. HOLLAND

Problems of the Industry

DR. JAMES C. WHITE

Dr. Robert F. Holland and Dr. James C. White, both of the Department of Dairy Industry at Cornell University, conduct their question and answer column each month in the "Review". Questions should be addressed to either Dr. White or Dr. Holland, Department of Dairy Industry, Stocking Hall, Cornell University, Ithaca, N. Y.

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Whipping Cream

QUESTION — We are wholesaling "whipping" cream testing about 27 percent fat. Recently a few of our customers have complained that although the cream whips they do not get a satisfactory increase in volume. We have a homogenizer and are wondering if homogenization of the cream would help to produce a greater volume when whipped.

J. A. C., Ky.

ANSWER — Homogenization of whipping cream ordinarily has exactly the opposite effect to that you desire. Pressures as low as 100 pounds per square inch will reduce the whipping quality of cream, and as pressures are increased whipping becomes more difficult and the product less desirable.

Numerous investigators have shown that the best whipping is obtained with cream having a fat testof 30 percent to 35 percent. It is probable that a 5 percent increase to 32 percent fat in your product would make a marked improvement in the whipped product. It would also increase your cost, of course, and may be impossible for that reason.

Another factor that is important is the aging period between pasteurization and whipping. Cream should be held at least 48 hours at a temperature of 38°F. to 40°F. for best results and should be maintained at this temperature *during the whipping process.* Both the whipper and whipping bowl should be chilled. If the cream is allowed to warm to 70°F., whipping failure is almost certain.

The type of whipper used also affects the volume of whipped cream obtained. The ordinary egg-beater type of whipper is the least efficient for cream. The turbine whipper or the perforated blade machine is best.

Large volume increases even with cream of low fat content may be obtained with the gas type of whipper. This device resembles the soda syphon bottle and contains cream and nitrous oxide or CO_2 under pressure. Sugar or flavoring may be added. Whipping occurs instantly on escape of the gas when the cream is released from the container through a nozzle. Many companies furnish their customers with these convenient devices at a small rental fee.

We hope these suggestions may be helpful in the solution of your problem.

UNRULY SPOUSE LAID LOW BY MILK BOTTLE . . .

Windsor, Ont. – A 34-year-old Amherstburg man with a record that includes–among other things –wife-beating, was knocked out by his wife. The feat was accomplished with a milk bottle.

When Robert Sanford combed the broken glass and milk from his hair he looked up to find Provincial Constable George Hannah in front of him.

Police had been called by Mrs. Sanford and her sister, Mrs. Julie Crowder, after Sanford smashed his way through the rear door of the Crowder home.

Sanford tore the telephone from the wall and caused about $25 damage to the rear door.

He pleaded guilty before Magistrate J. A. Hanrahan to a charge of wilful damage to property and was sent to jail for 30 days.

The Validity of the Cryoscopic Test

QUESTION — We understand from reading your column in the *American Milk Review* that the cryoscope is accepted as the legal method for the determination of adulteration in milk by the addition of water. Yet, we understand that in a recent court case—the people versus Fred Beers, Inc — the evidence of the cryoscope was not accepted and the defendant was acquitted. How come?

C. C., New York

ANSWER–On reviewing the briefs of the case you mentioned, we find that the defendant was acquitted because adequate precautions were not taken when the cryoscopic test was run. The legality of the cryoscopic method for the determination of the watering of milk was not questioned, but the chemists in the Health Department were negligent in that they could not show adequate knowledge of the errors involved in this determination or of the normal variation to be expected in the cryoscopic test. Where any test is used as a basis for court action, it must be run in duplicate by well trained personnel, with all the precautions necessary to limit errors to a minimum. Where this is done, the cryoscope has proved to be the best instrument for the determination of watering and is accepted as a legal test.

XUM

Sometimes women have to carry the banners

PERHAPS you'll see the story of Joan of Arc, as portrayed on the screen by Miss Ingrid Bergman.

It's a thrilling episode in the world's history, proving that sometimes a *woman* must take the lead in the fight she believes in.

Modern women, too, must often pick up the banners . . . in *their* struggle for the security and well-being of their family.

Though earning the necessities of life is primarily a man's job, sometimes it takes a *woman* to *insure* her family's future by setting them on the *only sure road* to security . . . through adequate, regular savings.

For the modern woman, there is one foolproof method of winning her fight for savings. It's United States Savings Bonds—an investment with the soundest backing in the world . . . an investment that pays back *four* dollars for every *three*.

And there are two foolproof savings plans, too. One is the Payroll Savings Plan, for those on a company payroll. The other is the Bond-A-Month Plan, for those not on a payroll, whereby bonds are purchased through the checking account.

If your home is your career, urge your husband, and all other working members of your family, to start now—today—on the bond-saving plan for which they are eligible.

If you are working, sign up yourself at your firm or bank, and influence the other working members of your family to do the same.

Soon the bonds will start piling up.

Soon you'll know that confidence in the future which only comes through saving.

It's a wonderful feeling for anyone. And for a woman—how doubly wonderful!

AUTOMATIC SAVING
IS SURE SAVING
U.S. SAVINGS BONDS

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THE CORRESPONDENTS REPORT

NEBRASKA

By EMMETT CURRY

HIGHER PREMIUMS are in store for producers in this milkshed. The agriculture department has approved premiums of 75 cents a hundred for the first quarter of the year; 60 cents for the next quarter and $1 for the last half.

Purpose of the premiums, which will apply equally to Classes 1 and 2, is to spur production in the short periods. The Class 1 premium has been 75 cents a hundred pounds on an annual basis.

Handlers previously had agreed to pay a premium of 25 cents a hundred December through March as long as the basic price is below $5 a hundred. . . . The November price was $4.44 for Class 1.

Dairies have said that they will re-examine their price structures early in the year. Roberts Dairy Company, which earlier had cut the price of its Grade A 1 cent a quart in Omaha made the same reduction in Hastings, Neb., where it sells only wholesale.

Handlers are reluctant to adjust milk prices along the lines of the basic price drop until the Administration's economic course is more certain. Some dairymen recall the chaotic experience of price controls on the industry during the war. They still point to the lack of regulation on the price of cream as a case of what could happen again.

Discussion of the fall incentive payment plan originated by Melxin Maxwell of Scottsbluff, Neb., was one of the highlights of a meeting of the Nebraska Milk Dealers Association in Lincoln. Mr. Maxwell keeps an individual scorecard on producers and makes incentive payments accordingly in the short period. B. F. Castle, executive director of the Milk Industry Foundation, Washington, declared at the session that the price of milk had increased from 52 to 66 percent since 1940 compared to a 115 percent for other foods.

Omaha dairy firms are co-operating in the city's smoke elimination drive. One of the largest anti-smoke installations was that of eight smoke reducers in the plant of C. A. Swanson & Sons. Fairmont Foods Company, January 3rd, made a 35-cent interim dividend payment on common stock as well as the quarterly $1 dividend on the 4 percent preferred stock.

Marvin Moore has succeeded Glen Holstein as manager of the Omaha plant of the Roberts Dairy Company. Mr. Holstein will become a dealer in dairy supplies and equipment.

Beatrice Foods was awarded the contract to supply Douglas County (Omaha) institutions with approximately $20,000 worth of milk in 1949 despite protests of other Omaha dairies. The protestants pointed out that Beatrice Foods was disclosed to be supplying substandard milk for a period. Beatrice Foods won the contract on its offer of a 11½ percent discount from wholesale for 3.6 butterfat milk.

As much as 25 to 30 percent of the Omaha milkshed's need are being imported from Minnesota, Wisconsin and Kansas. While the basic price for milk here has dropped to $4.99, cost of importation has driven it to an average of $5 a hundredweight. Imported milk is costing Omaha dairies $6.30 a hundred delivered.

Major importers from Minnesota and Wisconsin are the Roberts Dairy Company and Alamito Dairy. Smaller concerns get milk from Kansas. Roberts and Alamito bring as many as four to five 3,000-gallon loads in a week.

There never has been enough milk in the area to meet needs, said dairymen. Farmers are tending to corn, not milkers now. Then, too, there are fewer dairy cattle.

If the market stays stable and the need for imports ends as expected by February, a retail price cut may be in order, said dairy men.

The Department of Agriculture recently readjusted premiums and may start with the new schedule on January 1. Current premium is 75 cents a hundred the year around. The new schedule is 75 cents in January, February and March; down to 60 cents in April, May and June and up to $1 in the rest of the year.

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MASSACHUSETTS

By JEFF STERNS

AS PREDICTED in these columns several months ago, the price of retail milk dropped one cent a quart on the first day of January in the New Bedford area. At Martha's Vineyard and Nantucket two cents was cut from the price to the consumer.

The Massachusetts Milk Control Board announced that the cut was due to general improvement of the state's milk supply.

The reduction in price came as a surprise to some "in the know" because of the slight increase in dairy ration. In December dairy ration was boosted $3.79 a ton.

Under the new reduction dealers will pay producers 44 cents less a hundredweight and twice that in the Nantucket area which results in the two cent drop in place of only one on the mainland.

Another decrease in consumer price is due about April, but a lot of angles will have to be closely watched before any definite statement to the effect can be made. One of these is a new disease that has been hitting the dairy cow. Experts cannot name the sickness and so refer to it as "disease X".

The U. S. Government has taken steps to curb the disease by sending out field operators. These scientists will attempt to identify the sickness and find a cure for it. So far the only thing that is known is the symptoms which include watering of the animal's eyes and thickening of the skin along with a loss of appetite. This disease X has been killing cows in 26 states for the past weeks and in order to bring the price of milk down it will have to be put under control.

To make it worse, the disease hits at the young stock more so than the older cows. It is easy to see how this can result in disaster to the milk industry.

But to report another piece of good news from Mass. this month, State Agriculture Commissioner John Chandler announced that Massachusetts' most important agriculture products were poultry and dairy products. He said that the 1947 sales in dairy and meat products totaled $56,000,000. This is an increase of 35% during the past six years.

A demand from farmers and consumers for a sweeping investigation into the part played by milk dealers in the state of Massachusetts brought about a couple of startling facts that caused the two groups to stop and consider this past month.

Claiming that the price of milk was being kept up by dealers, the two groups demanded that something be done about it. This brought about the wrath of Cecil Ford who heads the New Bedford Milk Dealers Association.

Showing facts that the price of cream had gone down in price during the past month, Ford rapped the numerous restaurants that are placing signs announcing the price of their coffee going to ten cents, claiming that the price of cream was responsible.

"Cream has dropped $10 a jug in the past thirty days," Ford said. "And yet I am asked to pay ten cents a cup for coffee because restaurant owners claim cream is too high!"

As to the farmers' group, it is hard to tell which side of the fence they sit. They demand an investigation and at the same time call for a sufficiently high price in milk in order to attract young blood to the business.

Edward Kelly, a Hardwick, Mass. farmer related how the average age of men in the producing end of the milk business is fifty years.

"Young men are not taking hold," he said. "They do not want to stay on the farm. In my area alone there are a half dozen farms idle that once had 500 to 600 quarts of milk daily to be released to the market. All are idle now.

"If the price isn't kept up to keep young men in the industry, where will we get milk ten years from now?" he wanted to know.

Consumers were irked by not being able to shop around for different milk prices instead of having an overall price fixed by the state. Ford announced that the consumer should be happy over this condition because if it were not for state control the price of milk would have gone much higher than it is now, (24c Qt., retail).

"And the control of the state also assures the consumer of good health when he drinks his milk," Ford added. "The state control is hard on us," he went on, "but I'm glad it is. Our market is considered one of the hardest, and we hope it remains so for the health's sake of the state!"

The desire for an investigation slowly ebbed as the milk industry came forward with facts and figures. One member who asked that false advertising be stricken from milk ads was at a loss to show where any such advertising ever occured and so he added, lamely, " Well, if there is any . . ."

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GEORGIA

By CLYDE GAINES

THE BUREAU OF MILK SANITATION of the Atlanta Health Department has issued a list of 50 approved dairies holding permits to distribute Grade A pasteurized milk in the city of Atlanta. Each has complied with the Atlanta milk ordinance, which requires an average bacteria count of 30,000 per cc or less and 3.25 percent or more butter fat content.

The approved dairies are: Alpine Dairies, Irvindale Farms, Atlanta Dairies Cooperative, Jersey Ice Cream Co.,

Setting A New High
IN QUALITY AND VALUE

TODAY'S Layne Well Water Systems and Vertical Turbine Pumps set an amazingly new high in long lasting quality and big dollar value. Years and years of constant improvements in design has given them unmatched overall efficiency. And along with high efficiency there have been many improvements in quality. All strain points have been made heavier and stronger. All bearing surfaces are now tougher and longer lasting. Controlled precision in manufacture has added more smoothness to operation.

All in all, your Layne Well Water Systems and Vertical Turbine Pumps of today produce more water at lower operation cost than ever before. Dependability in construction features is not limited to a season or two. They are there to provide service for years and years with little or no upkeep expense.

But you will also be interested to know that if service of any nature is ever required, the Nation-wide Layne organization has the facilities and know-how to put your system back in perfect order with a minimum loss of time.

For further information about Layne Well Water Systems and Layne Vertical Turbine Pumps, write for catalogs, and bulletins. No obligation. Address LAYNE & BOWLER, INC., General Offices, Memphis 8, Tenn.

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Biltmore Dairy, J. P. Johnson Dairy, Briarwood Dairy, E. Lunsford Dairy, Brownlee & Lively Dairy, R. L. Mathis Dairy, S. T. Chastain Dairy, G. W. Northcutt Dairy, L. C. Northcutt Dairy, Cloverdale Dairy, M. L. Parks Dairy, P. T. Coggins Dairy, W. O. Pierce Dairy, Cole Bros. Dairy, J. O. Pitts Goat Dairy, W. C. Copeland Dairy, Pleasant Valley Dairy, County Line Dairy, Ponce de Leon Dairy, W. F. Cox Dairy, Rex Dairy, Creatwood Farms Dairy, Sheppard Bros. Dairy, L. J. Crowe Dairy, D. C. Sheppard Dairy, Dinsmore Dairy, G. E. Sheppar Dairy, Douglas County Co-op., Fuller Simpson Dairy, Flat Shoals Dairy, Southern Dairies, Foremost Dairies, Stamps & Parker Dairy, Georgia Milk Confederation, T. Q. Sullivan Dairy, E. Gladden Dairy, Sunrise Dairy, Henry Grade Dairy, C. C. Tuggle Dairy, High Rock Dairy, R. S. Tuggle Dairy, J. B. Honea Dairy, B. L. Wade Dairy, Ideal Dairy and Austin Wall Dairy.

Health Officers Meet

Health officers from all parts of the state met in Raleigh, North Carolina, early this month and agreed to support the minority report of the State Milk Commission, which recommends that supervision of the milk supply be assigned to public health officials. The milk commission was authorized by the 1947 General Assembly to make a study of milk control laws and their enforcement.

Russell H. James, director of the USDA food distribution program in the Southeast, is working with Georgia educational agencies to increase the number of schools serving Type A lunches with milk under the national school lunch program.

Georgia schools participating in the program served 34,110,950 noon lunches during the 1947-48 period. Sixty-seven percent of the lunches were Type A meals with milk.

●

TEXAS

By JIM TAGGART

PRICE DECREASES of ½c per quart on homogenized and plain pasteurized milk took effect early in January for two Dallas dairies, Metzger and Tennessee. The new prices reduced homogenized milk to 23½c and plain pasteurized to 22½c delivered to the housewife's door; over most chain cash-and-carry counters, 1c less. The price reductions applied only to milk in quarts, and in the case of Metzger's Dairies, only to milk in glass bottles. Other milk products were not affected.

Jacob Metzger of Metzger's Dairies said the price cut on milk in quart bottles was made to balance costs of packaging in cardboard containers.

W. C. Alexander, general sales manager of Tennessee, said his company was reducing prices because production of Grade A Milk has been increasing rapidly and a spring surplus is expected earlier than usual.

Three other Dallas milk distributors commented on the question of milk supply but said they contemplated no price decreases.

Three Front Battle

According to County Agent A. B. Jolley, Dallas County dairymen, faced with a shortage of herd replacements and the high cost of milk production, are fighting their problems on three fronts. Jolley placed the dairymen's problems and accomplishments for 1948 at the top of his annual report on the county agent's office and the state of the county's over-all agricultural program. He said the dairymen were:

1. Raising their own heifer calves to replace milking herds—more than 1200 in the past two years.

2. Stepping up the production of hay, silage and pasturage in an effort to lower milk production costs.

3. Breeding their cows to outstanding herd sires whose dams have exceptionally high milk and butterfat production records.

This last step, Jolley said, has made the average production of butterfat and milk by Dallas County cows twice that of other Texas dairy herds. The average Dallas County cow gave 280 pounds of fat and 6,540 pounds of milk in 1948, compared with 136 pounds of fat and 3,153 pounds of milk for other Texas cows. The county figures were compiled by the Dallas County Herd Improvement Association, which kept production records on 732 cows.

Although the outlook for dairymen over the United States is cheered by the big harvest of grain for 1948, there will be no marked increase in the production of milk in Texas, according to a report released from College Station, prepared by Dr. I. W. Rupel, head of the Dairy Husbandry Department, Texas A. & M. College. Dairymen themselves may be encouraged, but one factor which offsets this encouragement is the rather general drouth throughout Texas which made the supply fall grass very poor and which means that dairymen will have to depend on hay and silage for roughage in the absence of pasture.

Austin, Texas—When Price Daniel took the oath of office December 31st for a second term as Attorney General, he had just received three checks, totaling $75,000, representing penalty payments by 10 Texas milk distributors for violations of the anti-trust laws in Dallas, Ft. Worth and El Paso.

Daniel commented after the inaugural ceremony that he was more pleased to hear that two Dallas companies were reducing the retail price of milk by half a cent a quart than he was to receive the penalty checks.

"That's the first decrease in milk prices since OPA," said Daniel. "It's a good sign. Prices of milk in these three cities have been maintained artificially.

●

CALIFORNIA

By PETER FABRICIUS, Pacific Features

SACRAMENTO, CALIF.—The present grade A production of market milk and cream is good throughout the state. Some surplus is developing in the San Joaquin Valley, but as a whole the industry is beginning to approach a seasonal flush production. The Bureau of Milk Control is considering public hearings on the possibility of reducing minimum prices for market milk.

The price situation for manufacturing milk, on the other hand, shows a tendency toward reductions. The price of condensed and evaporated milk as well as butter has dropped, and the resale price naturally affects the producers' price. At present, the producer still gets 95 cents for manufacturing milk, a price that has been at that level since about December 1. But the decline of the paying ability of the manufacturer is an indication that manufacturing milk is due for some price reduction in the near future.

There is also a decline in cow replacement due to a reduction in price for beef animals. Early indications are that the hay acreage is shringing in the southern parts of California because some of the hay areas have shifted to the production of cotton and flax. Pasture conditions were slowed up throughout the entire West Coast, due to the unusually severe cold spells during January. However, the alfalfa market in Los Angeles kept steady during most of the month, and figures

just released, show that California led the nation in the 1948 sugar beet production and were second in barley only to South Dakota.

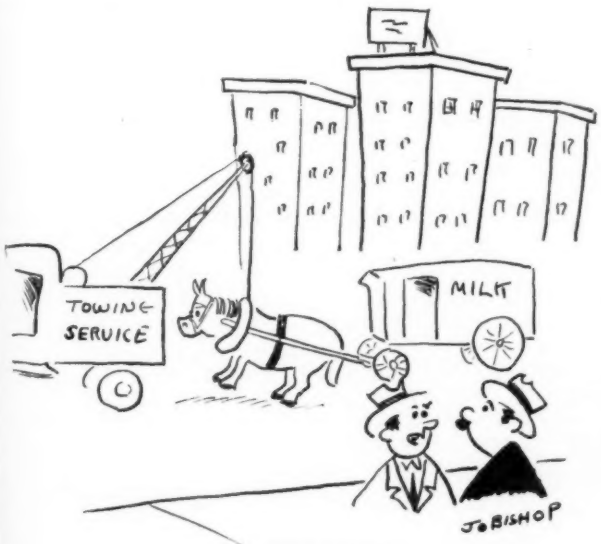
The California legislature has four bills in the hopper that will affect the local milk industry. One is a bill, sponsored by the California Farm Bureau, that proposes a reclassification of the milk from four into two classes. The present four classes distinguish between fluid milk, milk for cream, ice cream and butter products. The new law which generally is supported by producers and opposed by distributors, would lump together the first two classes into one class of grade A milk, including market milk and cream, and the second two into one class of manufacturing milk for ice cream and butter products.

The second bill before the California legislature would exempt schools and hospitals from the pricing provisions of the Milk Control Act. A third bill, sponsored by Senator Desmond, would require that the inspection fees for manufacturing milk no longer is paid from a levy on the processer, but from state general funds. Finally, the California legislature will have to vote on the Margarine Bill, permitting coloring of margarine.

The legislature in the state of Oregon will be called to decide on a proposal to remove price fixing and policing the milk industry from the State Department of Agriculture, and establish a separate milk control agency. The State Department itself favors the move.

The dairy industry welcomed the appointment of Dr. Paul F. Sharp as director of the Experiment Station of the University of California College of Agriculture. Dr. Sharp who started his work January 1, previously was research director for the Golden State Company, Ltd., and has distinguished himself as food chemist and outstanding authority on animal products. He has published 65 scientific papers in the field of dairy chemistry.

A local problem is the wage dispute between the San Francisco milk distributors and the Milk Wagon Drivers Union. The contract expired January 1. Negotiations started early in the month but were broken off when the distributors offered a five cents hourly wage raise, while the union demanded 18 cents. The present daily wage is 13.80. The dispute is anxiously watched throughout the state, as the San Francisco market usually sets the wage pattern for all of California.



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CUT THOSE STORAGE LOSSES

Like Wee Willie Sitting on the Wishing Gate We Often Miss the Obvious — Here Are Twenty-five Ideas that May Help with the Black Ink

By **ERNEST W. FAIR**

MOST OF US keep a weather eye open for possible sources of loss in the operation of our business. The average dairy plant executive who has survived a number of years of business experience has become very adept at keeping loss factors out of his operation.

Yet, in our over-all zeal, we often overlook some of the most obvious spots in which to "hang onto our profits" by eliminating losses, which after all, must come out of our net profits.

One such place, a number of veteran executives tell us, is in storage. Losses in this department are particularly high in small operations where storage is looked upon as just another inconvenience.

Here are 25 short cuts being used today by executives, both large and small, who have given a great deal of attention to this factor in their business operation and have profited thereby.

1. Use storage space that provides the maximum efficiency. Far too many firms select the "most useless corner" as the storage spot. A spot well-selected to provide maximum efficiency in operation of the business is most important.

2. Make certain everything is accessible. Every item in storage should be so stocked that it can be reached immediately; delays cost money, help create other costly factors such as breakage, damage, etc.

3. Every storage set-up should be flexible. It is most difficult, in these times, to anticipate any long range storage needs. Therefore any storage plan which is completely flexible is always a better one than a stop-gap space or system.

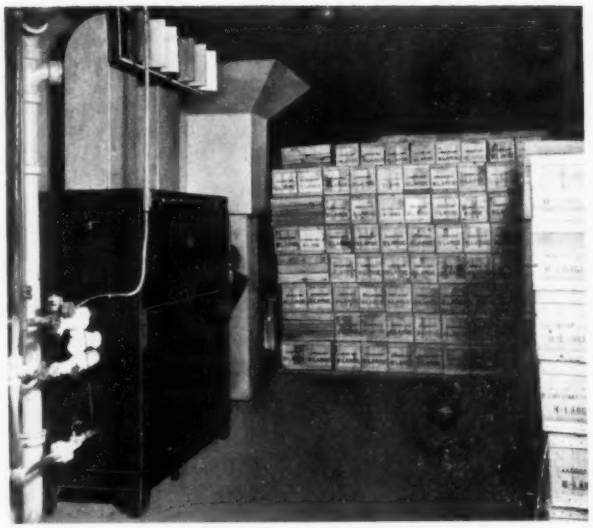
4. Store so that counting is easy. Inventory control costs jump sky-high when storage has been so haphazard as to make the job a long and tedious procedure. Counting is also necessary at many other times than during inventory periods; in planning new orders, controlling stocks for immediate business plans, etc.

5. Keep piles regular and uniform. Too many people look on the storage room as a catch-all corner and dump goods into it without plan or any attempt at neatness. Everything should be piled in regular and uniform stacks whenever possible. This prevents damage in storage, facilitates counting, reduces loss factors and lends itself to easier good housekeeping practices.

6. Handling costs should be kept at the very minimum. Items in storage, which must be moved about constantly before being put to use, are expensive to store. When an item can be set into its niche on arrival and left there until use, its storage costs have been kept very low.

7. Reduce exposure to weather or the elements as much as possible. Even on inside storage weather damage is possible in some cases through improper ventilation, a window left open during a rainstorm or over exposure to heat. Planning of stock-piling in the storage room helps to eliminate losses.

8. Provide dividing spaces between items. Dumping goods side by side makes accessibility of any one item a difficult job . . . if dividing space is provided between all such groups



Accessability, good provision for ventilation, uniformity of piling, ease if inventory, labels visible, all mark this arrangement as a fine example of proper storage.

handling is made easier, control more accurate and damage in storage reduced materially.

9. Place units so that labels are visible. One of the most prevalent signs of unsatisfactory storage procedure is to find a storeroom loaded with boxes and containers whose labels are hidden or which are not even labeled. This point should be checked each time a new container is placed in the storeroom.

10. Keep the order of piling and removing uniform, for smooth and neat operation of the storage procedure. Helter-skelter piling is never efficient; most often is a sure way to damage goods in storage. Neatness and uniformity eliminate damage losses, accelerate control and facilitate removal when the latter step must be taken speedily.

11. Keep old stock to the front; use it up first. The practice of using from a section and then stacking new arrivals in front of the remainder of old stock is seldom good procedure, for very obvious reasons. This is advisable even when the arrival of new stock requires complete re-arrangement of the old.

12. Standardize all equipment used in the storage room, such as shelving, bins, etc.; this facilitates re-arrangement for changing conditions and arrival of entirely new items and also lends itself to easier maintenance and upkeep of such equipment.

13. Plan storage for compactness and ease of handling of stored goods. Compactness utilizes available space to its maximum and also helps to keep down hazards brought about through accumulation of waste and debris around sloppily piled goods.

14. Make certain any storage bins, shelves, etc., used lend themselves to easy expansion, have proper strength and high

salvage value. The purchase of any such equipment should not be made until a complete study of future expansion of the business has been taken into consideration and one is assured that such equipment can handle the additional storage problems involved.

15. Take maximum precautions for safety in storage. This applies not only toward storage in such a manner as to eliminate collapse of piles, but also toward eliminating any possible physical injury to employees engaged in handling stored goods.

16. Fire is one of the most prevalent causes of loss in storage. Every fire insurance company has information on proper storage for its policyholders and many companies have individual practices which must be followed if insurance coverage is to be obtainable. Have the local agent check the firm's storage procedures and facilities regularly.

17. Guard against vermin of all kinds in the storeroom. Good housekeeping is the best practice to follow. Sealing all cracks in walls, floor and ceiling and elimination of damp conditions in the storeroom helps. Once the presence of vermin has been ascertained it must be exterminated immediately; delay is always very costly and expensive.

18. Cleanliness is a must in all storage. Not only is it needed to preserve the condition of stored goods, but it is helpful in eliminating fire hazards, reducing accidents and in pest and vermin control. Just as much good housekeeping as one applies to other sections of one's business should also be applied to the storeroom.

19. Keep goods off floors, away from walls and free of ceilings if it is at all possible to do so. Runners for floor storage are inexpensive and easily made. Their cost is insignificant when compared to the savings through elimination of damaged goods and increased ease of handling that they make possible.

20. Keep aisles wide enough to accommodate handling of stored goods. Attempting to secure more storage space by squeezing aisles between stacks is generally bad procedure. One of the most often neglected points is failure to make certain that there is plenty of room around corners for easy handling in the storeroom. Most accidents occur at this point; so also do greatest losses from collapsed piles.

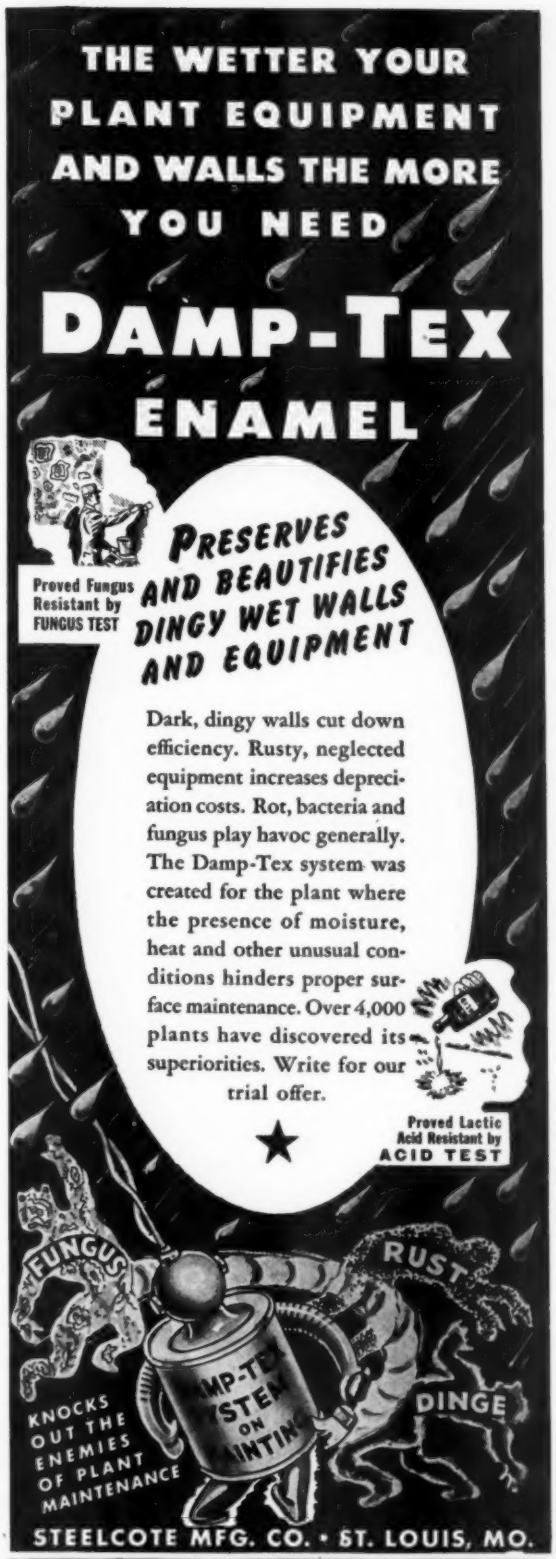
21. Provide an area for unpacking, inspection and temporary storage within the storeroom itself. This helps in the reduction of waste, cleaning up problems in other parts of the building, and greatly facilitates checking of goods before being removed from storage.

22. Provide fire-fighting apparatus for every part and section of the storeroom. If a sprinkler system is not feasible, then fire extinguishers should be in sufficient quantity and so-placed that one is always readily available from any part of the storeroom. Heavy losses can be sustained during the brief interval it will take a man to get from a far corner to the front spot where fire extinguishers are all too frequently placed.

23. Oily rags and other substances subject to spontaneous combustion must never be allowed to accumulate in any corner. Closed metal containers should be available for all such combustible material and these containers should be placed away from walls and stored piles of goods.

24. Goods subject to rust and corrosion should be stored in a dry place and in most cases should be slushed in oil or covered with heavy grease.

25. Goods easily subject to damage should always be stored in containers; preferably, the containers in which they were shipped from jobbers or factories.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V.A. Hospitals and Centers
STANDARD SPECIFICATIONS for DAIRY PRODUCTS

CREAM, FRESH PASTEURIZED

(Complying with Federal Specification C–C–67 1a)

General Requirements

Shall be cream or whipping cream, whichever is specified in the invitation for bids. Shall have been separated from fresh milk which is clean and drawn from healthy cows found free from tuberculosis when tuberculin tested within 1 year previous to the date of contract by a regularly employed Federal, State, or Territorial veterinarian, or by an officer of the Veterinary Corps of the United States Army, or by a veterinarian accredited by the State or territory and the Bureau of Animal Industry of the United States Department of Agriculture. For diseases other than tuberculosis, such tests and examinations as the local and/or State Health Department concerned may prescribe shall be made. All cream derived from milk obtained within 15 days before and 5 days after parturition, or such longer periods as may be necessary to render the milk colostrum free shall be excluded. Shall be pasteurized at a temperature of not less than 145° F. for not less than 30 minutes, or by other approved method of pasteurization yielding equivalent results, in pasteurizing apparatus the design and operation of which comply with the provisions of the Public Health Service Milk Ordinance and Code; cooled immediately to a temperature below 50° F. and kept at that average temperature until delivery; and delivered within 24 hours after pasteurization. Shall be fresh, clean, and free from objectionable odors or objectionable flavors. Shall contain no added water, preservatives, or other foreign substances. Shall contain not more than 0.2 percent of acid-reacting substances, calculated in terms of lactic acid. Shall contain not more than 100,000 bacteria per cubic centimeter at any time after pasteurization. Chemical analyses of deliveries, if required, shall be made in accordance with methods of the Association of Official Agricultural Chemists in effect on date of invitation for bids; all other analyses shall be made in accord with the latest edition of "Standard Methods for the Examination of Dairy Products" published by the American Public Health Association. The chemical and bacteriological standards incorporated in these specifications shall be regarded as minimum requirements. Bidders will be required to deliver cream in conformity with State laws or regulations, or local ordinances or regulations, where such laws or regulations require higher percentage of milk fat and total milk solids, or a lower maximum bacterial count. Shall be produced and handled in strict accordance with good sanitary practice, plants and equipment being subject at all times to the inspection and approval of the hospital or center. Shall be furnished by dealers who have filed with the hospital or center a certificate from the local or State Department of Health that all cattle from which the milk is obtained have passed satisfactory tuberculin tests within 1 year previous to the date of the contract, or that such cattle are accredited herds, or located in modified accredited areas, as defined in the current requirments of the United States Public Health Service Milk Ordinance and Code; and certificate from a licensed physician or a qualified bacteriologist certifying that all persons employed in pasteurizing and bottling plants from which the product is furnished have passed a satisfactory clinical and laboratory examination within 1 year previous to the date of proposal and are free from communicable diseases. Shall be delivered in sterilized and clean, sound containers which shall afford the cream adequate and proper protection from contamination and from spilling.

VA Item 165: Cream

Shall meet in all respects the provisions of "General requirements" of this specification for cream, and shall contain not less than 18 percent of milk fat.

VA Item 166: Whipping Cream

Shall meet in all respects the provisions of "General requirements" of this specification for cream, and shall contain not less than 30 percent of milk fat.

MILK, FRESH, PASTEURIZED

(Complying with Federal Specification C–M–381c)

General Requirements

Shall be fresh, clean, cow's milk, free from objectionable odors and flavors, and shall be drawn from healthy cows found free from tuberculosis when tuberculin tested within 1 year previous to the date of the contract by a regularly employed Federal, State, or Territorial veterinarian, or by an officer of the Veterinary Corps of the United States Army, or by a veterinarian accredited by the State or Territory and the Bureau of Animal Industry of the United States Department of Agriculture; *Provided,* That in modified accredited counties, in which the modified accredited area plan is applied to dairy herds, the modified accredited area system approved by the United States Department of Agriculture, Bureau of Animal Industry, shall be accepted in lieu of annual testing. For diseases other than tuberculosis, such tests and examinations as the local and/or State Health Department concerned may prescribe shall be made. All milk obtained within 15 days before and 5 days after parturition, or such longer period as may be necessary to render the milk colostrum free, shall be excluded. Shall contain not less than 11.25 percent of milk solids and not less than 3.25 percent of milk fat. Shall contain no added water, preservatives, or other foreign substance. Shall be pasteurized so that every particle of milk will be heated to a temperature of not less than 143° F. and held at such temperature for not less than 30 minutes or heated to a temperature of not less than 160° F. and held at such temperature for not less than 15 seconds, or by other approved methods of pasteurization giving equivalent results, in appa-

ratus the design and operation of which comply with provisions of the United States Public Health Service Ordinance and Code and are approved by the local and/or State Health Department concerned. Shall be cooled immediately to a temperature below 50° F. and kept at such temperature until delivery.

Milk shall be delivered within 24 hours after pasteurization. Chemical analysis, if required, shall be made in accordance with the methods of the Association of Official Agricultural Chemists in effect on date of invitation for bids. Bacteriological examinations shall conform to the standard methods and technique as prescribed in the latest edition of the "Standard Methods for the Examination of Dairy Products," published by the American Public Health Association. The chemical and bacteriological standards incorporated in this will be accepted. Bidders will be required to deliver milk in specification shall be regarded as the lowest standard which conformity with State laws or regulations, or local ordinances or regulations when such laws or regulations require higher percentage of milk fat and total milk solids, or a lower maximum bacterial count. Shall be produced and handled in strict accordance with good sanitary practice, plants and equipment being subject at all times to the inspection and approval of the hospital or center. Shall be furnished by dealers who have filed with the hospital or center a certificate from the local or State Department of Health that all cattle from which the milk is obtained are accredited herds or located in a modified accredited area, as defined in the current requirements of the United States Public Health Service Milk Ordinance and Code; and certificate from a licensed physician or a qualified bacteriologist certifying that all persons employed in pasteurizing and bottling plants from which the product is furnished have passed a satisfactory clinical and laboratory examination within 1 year previous to the date of proposal and are free from communicable diseases. Containers shall be filled and capped by approved mechanical equipment, and unless otherwise specified, the cap or cover shall protect the pouring lip to at least its largest diameter. Shall be delivered in sterilized and clean, sound containers which afford adequate and proper protection of contents from contamination and from spilling.

VA Item 167: Milk Fresh, Grade A, Pasteurized (Type II, No. 1)

Shall meet in all respects the provisions of "General requirements" of this specification for milk and, in addition thereto, all specifications for grade A pasteurized milk as defined in the current requirements of the United States Public Health Service Milk Ordinance and Code. The bacteria plate count shall not exceed 30,000. Only grade A milk produced in a locality which has formally adopted the United States Public Health Service Milk Ordinance and Code shall be accepted as type II, No. 1 pasteurized milk.

VA Item 168: Milk, Fresh, Pasteurized (Type II, No. 2)

Shall meet in all respects the provisions of "General requirements" of this specification and, in addition thereto, the specification for the local first-quality pasteurized milk as defined in the current requirements of the milk ordinance of the locality in which the point of delivery is geographically located, provided that their ordinances require the production of a higher quality milk than that specified under "General requirements." The bacteria plate count shall not exceed 30,000. Pasteurized milk meeting the specifications of milk ordinances of other localities shall be accepted when, in the opinion of the inspecting authorities of the purchasing agency, such milk is fully equal in quality to the local first-quality pasteurized milk normally obtained at the point of delivery.

VA Item 169: Milk, Fresh, Pasteurized (Type II, No. 3)

Shall meet in all respects the provisions of "General requirements" of this specification for milk. The bacterial

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count of the pasteurized milk shall not exceed 50,000 as determined by the standard plate count of samples taken at time of delivery or immediately thereafter.

(Note: Type II, No. 3 pasteurized milk should not be procured by any hospital or center except in localities where type II, No. 1, or type II, No. 2, is not available and then only after permission has been obtained from the Department of Medicine and Surgery.)

BUTTERMILK

(Complying with Federal Specification C-B-816)

General Requirements

Shall be plain buttermilk or cultured buttermilk, whichever is specified in the invitation for bids. Shall be fresh, clean, and free from objectionable odors and objectionable flavors, and shall be prepared from milk, or from cream separated from milk, drawn from healthy cows found free from tuberculosis when tuberculin tested within 1 year previous to the date of the contract, by a regularly employed Federal, State, or Territorial veterinarian, or by an officer of the Veterinary Corps of the United States Army, or by a veterinarian accredited by the State or Territory and the Bureau of Animal Industry of the United States Department of Agriculture; or from cows in accredited herds or located in modified accredited areas, as defined in the current requirements of the United States Public Health Service Milk Ordinance and Code. Milk from which the buttermilk is produced shall have been pasteurized at a temperature of not less than 142° F. for not less than 30 minutes, cooled immediately to a temperature below 50° F., and kept at that temperature until delivered; or pasteurized by other process which has been demonstrated to be of at least equal efficiency as the foregoing pasteurization and has the approval of the State health authorities. Shall be properly ripened and have a good, clean, tasty flavor. The finished product shall contain not less than 8.5 percent of milk solids, not fat. Chemical analyses of deliveries, if required, shall be made in accordance with methods of the Association of Official Agricultural Chemists in effect on date of invitation for bids; all other analyses shall be made in accordance with the latest edition of "Standard Methods for the Examination of Dairy Products" published by the American Public Health Association. Shall be produced and handled in strict accordance with good sanitary practice, plants and equipment being subject at all times to the inspection and approval of the hospital or center. Shall be furnished by dealers who have filed with the hospital or center a certificate from a licensed physician or a qualified bacteriologist certifying that all persons employed in pasteurizing and bottling plants from which the product is furnished have passed a satisfactory clinical and laboratory examination within 1 year previous to the date of proposal and are free from communicable diseases. Shall be delivered in sterilized and clean, sound containers which shall afford proper and adequate protection of contents from contamination and spilling.

VA Item 170: Buttermilk, Plain

Shall be plain buttermilk meeting in all respects the provisions of "General requirements" of this specification for buttermilk. Shall be the product that remains when the fat is removed from the milk or cream, sweet or sour, which has been properly pasteurized, has not been neutralized, and to which no other substances have been added in the process of churning.

VA Item 171: Buttermilk, Cultured

Shall be cultured buttermilk meeting in all respects the provisions of "General requirements" of this specification for buttermilk. Shall be made from pure, sweet, properly pasteurized skimmed milk and a pure culture of lactic acid bacteria.

ICE CREAM, SHERBETS, ICES

(Complying with Federal Specification EE-1-116a)

General Requirements

Shall be ice cream (plain, fruit, nut, bisque), French ice cream (French custard, parfait), sherbets, or ices—whichever is specified in the invitation for bids. All materials used shall be sound and wholesome. The milk or cream shall be from healthy cows located in an area designated by the United States Department of Agriculture as a modified tuberculosis-free area, or from cows in herds fully accredited as tuberculosis free by the United States Department of Agriculture. Chemical analyses of deliveries, if required, shall be made in accordance with methods of the Association of Official Agricultural Chemists in effect on date of invitation for bids; bacteriological analyses, if required, shall be made in accordance with the latest edition of "Standard Methods for the Examination of Dairy Products" published by the American Public Health Association. Shall be produced and handled in accordance with good sanitary practice, plants and equipment being subject at all times to the inspection and approval of the hospital or center. Shall be furnished by dealers who have filed with the hospital or center a certificate from a licensed physician or a qualified bacteriologist certifying that all persons employed in the plant or plants where the subject commodity is manufactured have passed a satisfactory clinical and laboratory examination within 1 year previous to the date of the contract and are free from communicable diseases. Shall be packed and delivered in clean, sound, standard sanitary commercial containers, or as specified in the invitation for bids. In addition, shall meet the following detail requirements for the particular kind and variety.

VA Item 172: Ice Cream (Plain, Fruit, Nut, Bisque)

Shall be pure, clean, frozen product made from sweet cream, milk or milk products, sugar, and harmless flavoring, with or without certified food color, with or without gelatin and/or other edible stabilizers, and with or without eggs. Flavors may include vanilla, chocolate or cocoa, caramel, almond, coffee, mint, maple, butterscotch, or other approved flavors; fruits may include strawberries, pineapples, peaches, cherries, bananas, figs, raspberries, or other approved fruits; nuts may include walnuts, almonds, filberts, chestnuts, pistachio, or other approved nuts; and confections may include macaroons, spongecake, marshmallows, candy, etc., as specified in the invitation for bids. The entire mix, except flavors, fruits, and nuts, shall be pasteurized at not less than 155/ F. and held at that temperature for 30 minutes, or by some other recognized method of pasteurization acceptable to local health authorities and giving equivalent results. Shall be properly homogenized and after proper freezing shall be properly hardened and otherwise in prime condition. Shall contain not less than 14 percent by weight of sugar, not more than one-half of 1 percent by weight of stabilizer, not less than 9 and not more than 12½ percent by weight of serum solids, and not less than 12 percent by weight of milk fat; except that ice cream in which fruit, nuts, cocoa or chocolate, or confections are used as flavoring shall contain not less than 10 percent by weight of milk fat; and provided that the total weight of milk fat and added material used as flavoring shall be not less than 12 percent by weight of the total mixture. The flavor of the finished product shall be pleasing and characteristic of the flavor specified in the invitation for bids. Finished product shall weigh not less than 4½ pounds per gallon and shall contain not more than 50,000 bacteria per gram.

VA Item 173: French Ice Cream (French Custard, Parfait)

Shall meet in all respects the provisions of VA item 172 above for ice cream, except that it shall contain eggs and shall contain not less than 14 percent by weight of milk fat.

VA Item 174: Sherbets

Shall be made from pasteurized milk, sucrose and/or other approved edible sugars, flavored with fruit juices or other natural and/or approved artificial flavors, and may contain egg albumen and a stabilizer. Approved certified food color may be added. Shall be frozen to the proper consistency when delivered and shall not have over 35 percent overrun, based on its weight before freezing. Flavor shall be distinct and characteristic of the flavor specified in the invitation for bids. Shall contain not less than 4 percent by weight of milk solids and not less than 0.35 of 1 percent of acid expressed as lactic acid. Bacterial count shall not be greater than 50,000 per gram.

VA Item 175: Ices

Shall be made from water, sucrose and/or other approved edible sugars and flavored with fruit juices or other natural flavors which will give to the finished product the distinct characteristic flavor specified in the invitation for bids. Approved certified food color may be added. The entire mix, except flavors, shall be pasteurized at not less than 155° F. and held at that temperature for 30 minutes, or by some other recognized method of pasteurization acceptable to local authorities and giving equivalent results. Shall be frozen to the proper consistency when delivered and shall not have over 30 percent overrun, based on its weight before freezing. Shall contain not less than 0.35 of 1 percent of acid expressed as lactic acid. Bacterial count shall not be greater than 10,000 per gram.

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Feed Prices Decline

Feedstuff prices declined materially throughout the Northeast, during the past week, according to the U. S. Department of Agriculture. The reductions reflected plentiful supplies and lower prices on feed grains, particularly corn, which is now relatively cheaper than wheat millfeeds and oilseed meals.

The continued mild weather in Eastern portions of the country tended to curtail demand, with current inquiry for feedstuffs less active than in recent weeks. Production continued relatively large, and offerings of most feeds were ample for trade requirements.

Demand for millfeeds was slow, as most buyers drew supplies from purchases made earlier in the season. But production was large, offerings were liberal, and markets were under considerable selling pressure. Over the Northeast, wholesale prices of bran ranged from steady at Buffalo, to another $1.25 a ton lower at New York City. Middlings sold 25 cents lower at Philadelphia, but $1.00 a ton lower at the other principal Northeast markets.

Oilseed meals also averaged lower, with the sharpest decline on cottonseed meal. Losses ranged from $2.00 a ton at Philadelphia to nearly $5.00 a ton at Boston. Soybean meal prices were irregular, with meal for prompt shipment generally dropping to the levels previously reported for deferred shipments. Boston was up $2.00 a ton, but Buffalo was off that amount, and New York down $2.50 a ton. Linseed meal did best among the oilseeds. Boston gained 50 cents, but Philadelphia was off $2.00 and Buffalo was again off $3.00 a ton.

Distillers dried grains were weak and sharply lower, declines ranging from 40 cents in New York to $13.50 a ton in Boston. But brewers dried grains rallied, with prices ranging from steady to $2.30 a ton higher, at various Northeast markets.

• Review Want Ads Pay •

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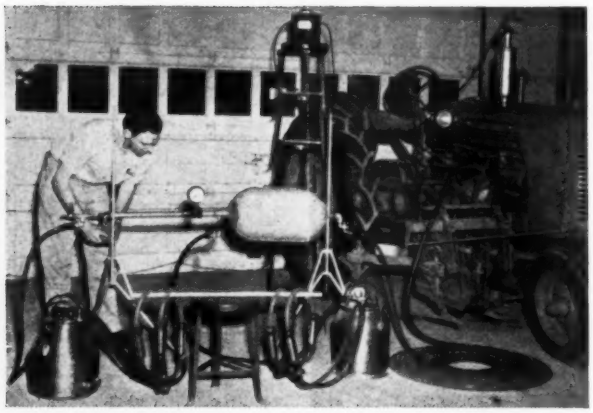
AN EMERGENCY SOURCE OF POWER

Power Failures Occur Even in the Best of Families — When It Happens at Milking Time a Garden Hose and the Tractor Can Supply the Vacuum

By **B. F. CARGILL and J. R. SCHRAM**

Michigan Agricultural Experiment Station



Utilizing a few simple attachments a tractor can be made to serve as an emergency source of power for the milking machine. Vacuums of 18 to 22 inches of mercury have been produced by this method.

A SURVEY INDICATES that approximately 45,000 miles of electric lines serve 165,000 Michigan farmers, of whom many operate electric milking machines. In most cases the source of generation is several miles from the farm served; therefore, it is sometimes difficult for utilities to maintain continuous service to each farm.

When a power failure occurs, affecting dairy farmers, the authors suggest a temporary method for supplying the required vacuum for the milker. The farm tractor is capable of developing at the intake manifold a vacuum expressed as 18 to 22 inches of mercury. In the laboratory four individual milkers were operated at one time with one tractor. The proper vacuum and rate of pulsation were maintained for all units.

Under actual milking tests, when electrical lines to the milker were disconnected and the above-mentioned method used, it was found that with little added work the farmer was able to milk in the same time normally required. During tests only two units were used at a time.

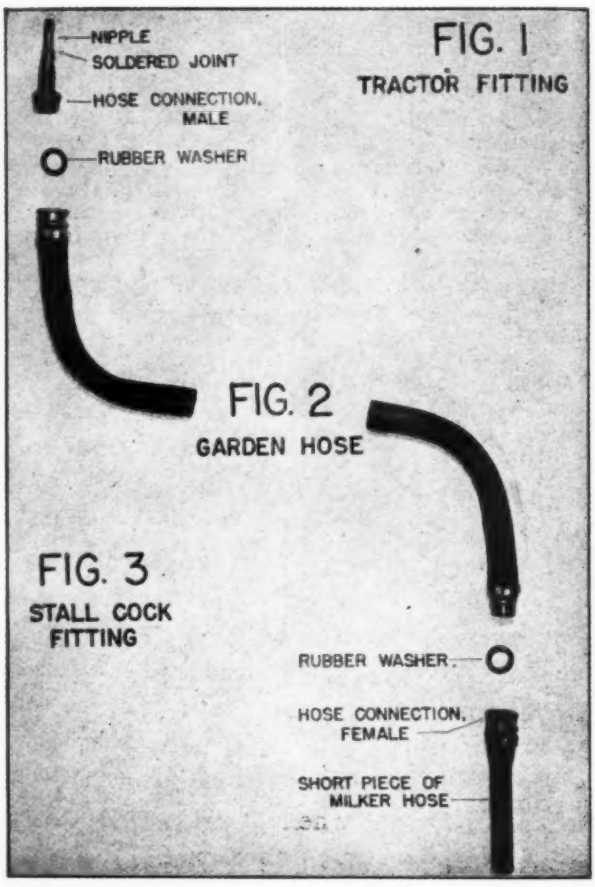
To use this method, remove the intake manifold plug, install tractor fitting (Fig. 1), make garden hose (Fig. 2), and stall cock connection (Fig.3). Make sure all connections are tight.

Close stall cock and crimp the garden hose near the tractor before attempting to start.

A slow engine speed produces more vacuum than that of either one-half or full throttle. For successful milker operation set the throttle for the slowest R.P.M. at which the engine will operate satisfactorily.

Open the stall cock slowly because a sudden demand for vacuum may stall the engine.

Milking is accomplished in the usual manner, but as a precaution, check the vacuum gage and rate of pulsations.



A tractor fitting length of garden hose, and stall cock fitting all home grown, constitute the equipment necessary to exploit the vacuum producing capacities of a tractor.

When changing from milker pump to tractor for the source of vacuum, it is necessary to make the connection in such a way that the original vacuum tank will remain in the line. This tank serves as a supply tank to enable the tractor to maintain a constant, even amount of vacuum. A fluctuating vacuum gage reading and tendency for the tractor to stall result from the pulsator action, and uneven demands for vacuum if the supply tank is not used.

A relief valve is necessary because a tractor produces a vacuum of 18 to 22 inches of mercury. This is too high, as a milking machine requires only 10 to 16 inches of mercury, depending upon the make. A vacuum relief control is necessary in the line to maintain the required vacuum. Each milking machine installation has one of these controls in the line, so do not eliminate it when making the change.

The number of units operating successfully depends on the size of the smallest opening in the vacuum line. The authors have satisfactorily adapted a 1/8-inch pipe fitting to the intake manifold.

It was thought that adding a small amount of air through the intake manifold would have an effect upon the air-fuel ratio entering the engine. An exhaust gas analyser was used to test exhaust gases, and it was found that the tractor was operating within the normal range (Fig. 4).

Reprinted from Michigan Agricultural Experiment Station Quarterly Bulletin, Vol. 31, No. 2. Pages 157 to 159 Inc. November 1948.

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Nutritional Ad Campaign

National Dairy Council Pushes Dairy Products Sales Through Nation-Wide Promotion to Be Launched in February

CHICAGO, ILL.—To help you sell more dairy products, the National Dairy Council launches in February an extensive advertising program in 12 professional magazines, whose 1,000,000 readers shape, in a large measure, the food habits of America's 147 million men, women and children.

This is another major activity in NDC's research and educational program to tell consumers, through national, state and local key leaders, how science enlarges markets and serves as the life blood of the dairy industry. Industry membership, source of ad funds, includes processors and handlers, machinery and supply manufacturers, and milk producers through the American Dairy Association. In addition special funds are provided by the Public Relations Committee of the International Association of Ice Cream Manufacturers.

Milton Hult, President of the National Dairy Council, states that the advertising program, for all dairy products, comprising four ads, with 57 insertions in 12 magazines, will run through October 1949. The ice cream advertising program, of three ads with 39 insertions in 12 magazines, will run through June 1949. As a combined package, this program, accepted by the Council on Foods and Nutrition of the American Medical Association, directs to key leaders 7,500,000 messages on the health-giving and health-sustaining qualities of dairy products. This represents almost a 100 percent increase over the number of messages in last year's program.

Six leading executives in advertising and sales from the dairy industry were invited by NDC to serve as an advisory committee in the development of the advertising program. This group counsels the advertising agency, McCann-Erickson, Inc., Chicago, and the NDC Committee in formulating the advertising program for greater readership acceptance of nutrition information on dairy products. Committee members are: R. P. Touton, Shurtleff Ice Cream Company, Janesville, Wis.; D. H. Bromley, Bowman Company, Ice Cream Division, Chicago; G. V. Rector, Fairmont Foods, Omaha, Nebr.; T. B. Niles, The Borden Company, New York; A. R. Stevens, National Dairy Products Corp.; New York; and A. J. Claxton, Meadow Gold Dairies, Inc., Pittsburgh, Pa.

After skillfully screening magazines in the home economics, educational, dental, medical and nursing fields, these publications were selected: Forecast for Home Economics, Journal of Home Economics, Practical Home Economics, What's New in Home Economics, N. E. A. Journal, American Journal of Nursing, American Journal of Public Health, Journal of American Dental Association, Journal of American Dietetic Association, Journal of American Medical Association, Geriatrics and Journal of National Medical Association.

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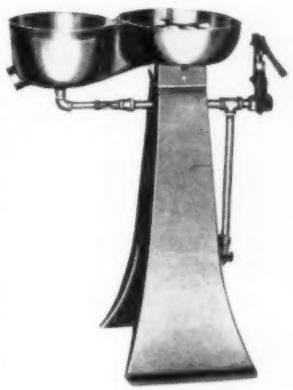

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EMPLOYEE SUGGESTIONS

(Continued from Page 28)

and one woman. These five bask in the spotlight. Their photographs appear in the firm's house magazine in conjunction with interviews. One interview told how more work can be done with less effort, pointing out, too, that there are, in the various departments, many still undiscovered short cuts to increased production. Another interview enlightened how the accepted suggestion bonus enabled the winner to buy luxuries she could not normally afford.

Employees Who Drop Out

QUESTION: Our suggestions plan is continuous. Unsuccessful employees drop out. Is there anything we can do to encourage them to try again and again?

ANSWER: Try positive tactics. Acquaint them with the kinds of ideas which OTHER employees *continue* to submit with success.

One firm, in a summary of recent awards, publicly explained they made the grade for one or more of the following reasons:

1. The suggestion was to conserve material, energy or time.

2. The suggestion was to improve existing methods.

3. The suggestion was to eliminate or improve a tool, fixture or other equipment.

4. The suggestion was to eliminate an existing safety hazard.

5. The suggestion was to increase the output of a machine..

6. The suggestion was to improve the quality of the product.

Softening the Rejection

QUESTION: Is "if at first you don't succeed, try again," a first-rate morale sustainer? If it is, what have you on tap?

ANSWER: Nothing better. One firm received a certain suggestion for which it had long sought. Unfortunately, it was not practicable in the form submitted. It went back to the suggestor with a personal letter from the president. The letter started out by praising the employee, which paved the way for the next paragraph, in which the defects of the suggestion were pointed out. The next, and last paragraph, suggested HOW and WHERE the suggestion could be improved, and concluded by urging the employee to try again. Well, the worker took the advice in good part, and came back with a flawless plan.

Another company gains immediate reader interest to its suggestion blank, by prominent "boxing" of the following fable:

"Two mice fell into a deep bowl of cream. One couldn't see the use of swimming. That mouse gave up and drowned. The other mouse was discouraged, too, but he didn't know how to quit. He just kept on swimming and finally when things looked blackest, a miraculous thing happened. The churned cream hardened, turned to butter, became solid, and the mouse was able to jump out alive.

"The moral of course is—Hang on, keep fighting, and you'll win out in the end. Don't let that rejected idea pull you down. TRY AGAIN."

Paper Expression Difficulties

QUESTION: Most of our employees out on the factory floor do not shine as letter writers.

ANSWER: You might do, as one firm did, and suggest that an employee contact the department or section head. This head's superior intelligence should be able to spot both the weak and the strong points of the suggestion, and show how it can be made more workable. When this stage is reached, a stenographer should be provided to take notes of the revised and expanded plan, duly considered at the next meeting of the company's suggestions committee.

Personal Coaching

QUESTION: Suggestions crudely and briefly put on paper are turned back for more details. Would a personal approach improve this well-meant paper work of employees?

ANSWER: It has been done by having an excutive go through the plant department by department. He coached them on how to describe their suggestions. He patiently answered their many questions. The blanks turned in were greatly improved.

Another practical approach is by taking some *specific* subject for which suggestions are sought. For example, suppose production, maintenance or distribution costs are higher than they should be. In putting this over, it is vital to emphasize that this condition is no reflection on the workers or their foremen. But—by putting their heads together—pooling their brains—a way may be found of operating a department at less cost. (Danger signal: Workers may listen, but take no action, for fear department personnel will be reduced.) Promise, then (and KEEP that promise) that such department economies will make it possible to reduce the selling price, and thus create a greater demand for the company's product.

Buy More U. S. Bonds

Full Supply of Suggestion Blanks

QUESTION: Complaints come from employees they cannot get suggestion blanks when they want them.

ANSWER: Have a clearing house for blanks in each department, making *one* person responsible for constant replenishments from the central source of supply.

Blanks Wasted

QUESTION: Our headache is the waste of suggestion blanks. Some employees pull a bunch of them off a pad, use one, and later discard the rest.

ANSWER: One firm which used to issue them in pad form, now staples the blanks in threes. This is not too few or too many at one time, if the employee has trouble in putting his ideas on paper, and makes one or two false starts before turning in the polished suggestion. After all, paper is cheap, and if the employee is not used to expressing himself on paper, far better to receive his third effort to describe the one idea than the crude first attempt.

Tardy Claimants

QUESTION: What would you advise doing when a suggestion award is not claimed within a reasonable time?

ANSWER: It is, from the employer standpoint, the one drawback to anonymity. One large company has a growing list of unclaimed awards. Although the list is given frequent and plant-wide publicity, the number of unclaimed awards is not materially reduced. The company, whose employee relations are considered excellent, concludes that the employees contributed the suggestions from sheer goodwill—to even up the score—and, further, these employees get a secret kick out of seeing their award numbers broadcasted from time to time.

This company ceases to publicize these unclaimed awards at the end of a full year, when they are placed in the files. Any award may be claimed if the employee belatedly comes forward with the claim coupon bearing the corresponding number.

Purchased Suggestions Not Used

QUESTION: What will happen if we pigeonhole most of the purchased suggestions for possible, or problematic, future use?

ANSWER: Bad, bad, bad for employee morale. Even during the peak of wartime production and maintenance restrictions, one gigantic corporation contrived to put eight out of every ten suggestion awards into practical application within a few weeks.

Mistake not to make the suggestions campaign specific. Employee's minds wander aimlessly, with the result that

some suggestions, while they MAY be of use in the far future, are not related to present or pending conditions.

Advisibility of Frequent Collections

QUESTION: Am I disillusioned—scraps of waste paper and orange peelings clutter up our suggestions boxes.

ANSWER: One firm in the same boat probed for the cause among employees. Chief complaint was that the boxes were cleared too seldom. And WHEN they were cleared, action was equally slow. Employees got to rating the suggestion scheme as a big joke, hence the waste paper and orange peel contributions.

IOWA CHAMPIONS

(Continued from Page 10)

father and his uncle are in the dairy business, owning and operating a plant in Ortonville, Iowa. At Atlantic City Don took first in Butter, first in Ice Cream, and eighth in Cheese. Milk was his poorest product and he finished out the first ten. It was in this class that he lost the points that would have given him first place in All Products. As it was he finished a close second to Michigan's Don Moore.

Charlie Fitch, pressed close on Pflueger's heels. He is a town bred boy from Cherokee with a love of things agricultural. He too is a veteran, married, and possessed of dairy background through summer jobs in the dairy industry. He contributed mightily to Iowa's victory with a sixth in Butter, and a seventh in All Products. Although he was out of the first ten in three products his work was sufficiently consistent and close to the leaders that when the totals were compiled he was up where it counts.

Did Ya Win Pop?

Son and nephew of dairymen is Arnold Nelson, who stood third in the Iowa ranking at Atlantic City. Arnold's background fits into the pattern established by his team mates. Like them he is a veteran, married, with roots in the dairy industry. Unlike the others, however, he is a dad. He met his wife while working in a creamery at Danville, Illinois. If the youngest Mr. Nelson turns out to be anything but the best durned dairy plant operator in this State of big league operators, heredity and environment will have lost their punch. In the business of bringing the judging championship back to Ames, Arnold contributed a third in Cheese, a second in Milk, and a tenth in All Products.

Rounding out the team is Jim Davies. Each team is allowed one alternate. This was Davies' role in the Atlantic City competition. Although he did not get into contest through the failure of any of his three mates to break a leg or catch pneumonia, he is a capable judge of dairy products and without question would be a leading man on almost any other team. It is not an easy matter to climb aboard that Iowa State dairy products special, not an easy job at all. He shares with Arnold Nelson the distinction of being a father.

They'll Bear Watching

These are the young men who came closer than any other group of young men in giving the correct valuation to a large and varied group of dairy products at the Collegiate Students' International Contest in Judging Dairy Products at Atlantic City. Like the Century Plant that flowers only once these boys have but a single chance to display their judging abilities in collegiate competition. A completely new team will represent Iowa in the 1949 competition. It is a good bet that Coach Rosenberger is already lining up prospects for the next contest. It is also a good bet that the 1948 team will occupy a place in his recollections for a long time to come. And as a final wager it would seem like money in the bank to entertain the proposition that neither Mr. Rosenberger nor the dairy industry has heard the last of the Champs.

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FOOT-AND-MOUTH DISEASE

"Cooperative effort of Mexican and U. S. representatives have succeeded in confining foot-and-mouth disease to an area in Mexico slightly smaller than that originally quarantined." says B. T. Simms, Chief of the Bureau of Animal Industry, U. S. Department of Agriculture, in his annual report. The report also summarizes the Bureau's work in preventing and controlling other livestock diseases and the improvement of the country's livestock.

Especially noteworthy is the fact that foot-and-mouth disease, which it unchecked may spread very rapidly and cause serious losses, has been prevented from spreading to northern Mexico, the United States, and Central America. To aid further in the control of the disease in Mexico a laboratory for producing foot-and-mouth disease vaccine was established in Mexico through the cooperative work of Bureau and Mexican scientists of the joint Mexican-United States Commission. Production of vaccine was begun in May 1948. During December, 1948 this laboratory produced 1,750,000 doses of vaccine.

Among the many disease-control measures conducted in this country the Bureau's report describes a serious outbreak of infectious anemia in race horses in the New England States during the summer of 1947. The outbreak was checked through the cooperative efforts of State and Bureau veterinarians and race-horse owners. During the year the Bureau also aided in suppressing an outbreak of equine encephalomyelitis (sleeping sickness of horses) in Louisiana and minor outbreaks in other States.

HIGH QUALITY CREAM

(Continued from page 24)

dangerous. Particular care must be exercised that no rinsings from vats are included in the regular cream supply. In all plants 35-pound-per-ream parchment should be used under the can covers.

Traffic departments dealing with cream shipments need to be intimately acquainted with all icing needs. These are dependent, of course, upon weather, distance of shipment and amount of product in the car. Cars should be scheduled so that strictly fresh products leave the plant and arrive at their destination in as short a time as possible.

Any plant endeavoring to supply high-quality cream must employ an excellent laboratory which regularly measures quality by various objective tests. These should include at least the following:

1. Bacterial counts, total, coliform and check on psychrophils after storage.
2. Flavor.
3. Acidity.
4. Body and physical characteristics.
5. Phosphatase values.
6. Butterfat test.
7. Final temperatures in filled cans.

Further improvement in milk supplies from the farm as well as the end product, is to be expected. As more mechanical coolers and other facilities are adopted and additional information is available to producers, improvement will come. As additional scientific knowledge is applied to processing methods, the end product will be of still better quality. The adoption of sterile plastic bags which fit into the can or jug, is being considered and undoubtedly offers increased protection to the product.

The remarkably fine cooperation, counsel and guidance of both health officials and buyers to Western shippers have been extremely valuable. Several of the companies promptly return the results of their tests on each car of cream shipped.

> Swiss Cheese consumption may increase as a result of a new process of packaging half-pound units and will go into commercial practice immediately. A small amount of process cheese acts as a protective outer coating for the Swiss, and will make possible a variety of flavors that can be used for this coating.

These include bacterial counts, flavor score, acidity, phosphatase values, keeping quality results and temperatures. The continuance of this practice, plus the forwarding of other valuable information, is urged because all suppliers will be increasingly concerned about the condition of arrival and final acceptance of their cream. The continued advice and suggestions of health officials is indicated and will be genuinely appreciated.

Only through the diligent and honest application of quality control by the suppliers, can they logically expect the continued confidence and faith of health officials and buyers. Only through the combined efforts of all three groups, will high-quality cream be continually available and acceptable as a fine, safe food.

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THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

MILK GOES TO SUN VALLEY

(Continued from page 14)

Coffee cream used at Sun Valley is 25% butter-fat and whipping cream is 36% butter-fat.

One Rides to the Top

From the skier's view point one of the major attractions of Sun Valley, in addition to its superb slopes, are the ski lifts. Ever since the first primitive Norwegian strapped on his skiis, men have been confronted with the cold reality that whatever comes down must go up if it wants to come down again. And if a skier has no other mission in life he does want to come down. The modern method of solving this problem of getting up a hill so that one can ski down with all the breath-taking exhilaration that makes the sport so facinating, is the ski tow or ski lift. Some tows are merely endless ropes that move over drums or pulleys. Others are overhead conveyors from which are suspended chairs in which the skier can ride. There are even ski-mobiles and aerial tram-cars all devoted to the proposition that in order to get to the bottom of a hill one must first get to the top.

At Sun Valley there are eight fast, electrically-powered chair lifts, including one on Baldy Mountain in three sections, 11,500 feet long, with a vertical rise of 3224 feet. Another chair lift is the new "Broadway" lift that whisks skiers up the slopes with a vertical rise of 1,090 feet. These lifts together with the other, possibly less spectacular lifts, constitute that skiers dream come true, "a maximum of downhill skiing with a minimum of effort.

To Sun Valley from the ends of the earth come the great and the near great to sample the delights of Idaho snow. In a sparkling blaze of fine snow dust Gretchen Fraser, comely slalom queen, swoops down Baldy Mountain. Over yonder is Andrea Mead, the 14 year old ski rocket from Rutland, Vermont, a member of the 1948 Olympic ski team. And that remarkable combination on Proctor Mountain is a Sun Valley photographer mounted on skiis trying to take a picture of another Sun Valley photographer mounted on skiis who is trying to take a picture of Mr. Gary Cooper who, strangely enough, is also mounted on skiis.

One must travel a long hard road before finding anything that can equal this 18 carat filling in the upper molars of the Sawtooth Mountains. Its surroundings are majestic. Its skiing is sublime. Its accommodations are luxurious. And for the greater glory of the fluid milk business, be it recorded that to insure the good health and good living of its guests, Sun Valley serves better than one hundred and fifty thousand quarts of milk a year.

PREDICTS PRICE DECLINE

President of Borden's Sees More Settled Conditions in 1949 — Cites Recent Price Drop

PRICES of dairy products appear to have reached their peak, and the immediate outlook is for a seasonal down-trend until early summer at least, Theodore G. Montague, President of The Borden Company, said in a year-end statement to the press. Looking even further ahead, he said it seems unlikely that 1949 prices will touch the high level reached early in 1948.

All predictions must, of course, be based upon certain assumptions and subject to certain exceptions, Mr. Montague pointed out. In this case, he said, the assumption is that general conditions are becoming more settled and will not be stirred violently up by new inflationary moves. The exception, he added, is that local or temporary situations, or Government price-fixing or large-scale buying, may result in movements contrary to the national trend.

Recent price declines in several markets have turned the national average price of milk downward for the first time since June, 1947, he noted. Steps toward a seasonal decline in fluid milk prices have already been taken in some Federally-controlled markets. He pointed out that in New York, for example, dairy farmers themselves requested a drop of 1 cent per quart effective January 1 and an additional cent on April 1.

Declaring that demand for dairy staples is expected to be good, Mr. Montague said:

Dairy Products Relatively Low

"Compared with the last prewar year, the average rise in dairy product prices is in line with increases in the general price level. But dairy product prices are relatively low in comparison with food prices generally, and particularly low when compared with prices of the principal foods with which they compete.

"A favorable competitive position, plus the normal population increase, is expected to furnish a good market in 1949. There should be ample milk to supply this market. Fall production of milk was unusually high, largely because farmers fed more heavily from the lower-priced, bumper feed crop. With a substantial grain carry-over in 1949, farmers will probably maintain heavy feeding schedules. In this way higher production per cow will offset losses in cow numbers, and total milk production should be slightly higher in 1949."

Stocks of manufactured dairy products, now standing in good relationship to supply, have caused the industry some embarrassment, Mr. Montague said. The bulk of these products is made in the spring when milk production is at its highest point. Prices are usually lower then, rising later in the year as stocks diminish. In 1948, however, there was a counter-seasonal trend, Mr. Montague pointed out. Prices failed to drop in the spring, and declined abnormally in the summer and fall, creating unavoidable inventory losses.

"In the case of our own company," Mr. Montague said, "several factors helped to cushion this drop in values. A policy of rigid inventory control kept stocks as low as consistent with good operating practice. And such losses as could not be avoided were provided for in part by the reserves set up by the LIFO principle of inventory valuation.

"Thus, on the basis of a 10-month operating experience, it appears that the profits of our company will be somewhat lower than in 1947, despite an all-time record in dollar sales.

"Profits during these inflationary years have failed to reflect the declining value of the dollar. Quite apart from denying stockholders dividends which current conditions justify, inadequate earnings make it difficult for corporations to perform efficiently and effectively the services which the public expects of them.

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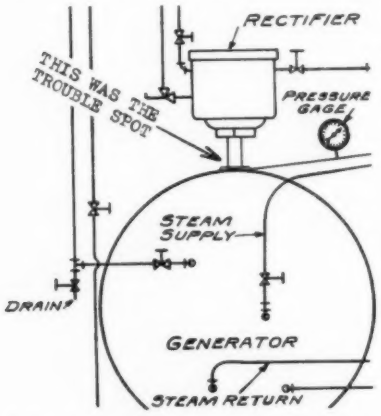
MAINTENANCE TALK...

Paste Saves the Joints

Here is an instance where, in this writer's experience, about 5c worth of paste saved over $100 for a refrigerating company. Occurrence of this nature are not at all uncommon, yet we are inclined to forget about, or ignore, the tremendous earning power of pastes, paints, dressings, and "stitches in time," and the like. The writer was connected with the above manufacturer for nearly four years. We manufactured and installed an absorption ice making and refrigeration system.

In the operation of the system ammonia pressure went up to about 175 lb. per sq. in. and inasmuch as the generator was under that pressure part of the time and under a vacuum during the rest



of the time, being hot while under pressure and cool while under vacuum, it is evident that to keep joints tight was not a simple matter with this system of refrigeration. On account of joint trouble, it was found that riveted construction would soon leak and that welding of the longitudinal and circumferential joints was necessary. In fact, that company pioneered the welding of pressure vessels of that type and, to be sure, we had much trouble as pioneers usually do. In one installation an operator was killed when the generator seam suddenly parted and in the explosion which followed the sheet of metal of which the generator was built was flattened out against a brick wall. In the sketch herewith, a generator is partially shown.

At "this" end of the generator was a pot shaped "rectifier," also shown in the sketch. This rectifier was joined to the generator by means of a nipple, also visible in the sketch. This nipple, like

***Maintenance Talk** is another new feature which the "American Milk Review" will present each month. This month's page is the result of contributions by Mr. W. F. Schaphorst of Newark, N. J. It is our hope that other men, familiar with maintenance problems, will contribute to the new feature. We extend to all of our readers a cordial invitation to participate.*

all other nipples and pipes, was welded to the generator for the sake of tightness. The top of the nipple was threaded to receive the rectifier.

Much trouble was experienced with one of the installations because of leakage of ammonia gas through the threads between the rectifier and the nipple. Whenever ammonia leaks, everybody in the vicinity soon knows it, particularly when the leak is as "bad" as in this instance. There was much complaining by neighbors and others because of this leakage. In fact, the city council in this particular instance was on the point of declaring the plant a nuisance and forbidding its further operation.

Attempts were feverishly made to tighten the rectifier sufficiently with a wrench to stop leakage, but leakage, when under pressure, persisted.

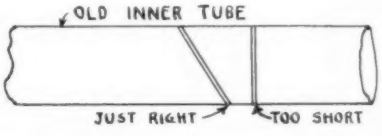
For a while it was thought that it would be necessary to weld a new nipple into the generator because of the faulty threads on the nipple being used. We were certain that the threads were faulty because other similar installations gave no trouble. This writer figured that the cost of welding a new nipple onto the generator would be well over $100 because expert welders would have to be sent there by the manufacturers of the generator. All of the ammonia would have to be removed from the generator and as the amount of ammonia was considerable and the ammonia drums had already been returned to the ammonia manufacturers, it would be expensive to obtain them, empty the generator, weld in the new nipple, refill the generator, and then return the drums to the ammonia concern. Besides, insulation would have to be removed from the generator and possibly the generator would have to be rolled over so that the welders could get at it. This would necessitate disconnecting all of the piping shown in the sketch plus more piping that is not shown and would be equivalent to doing the job of installing all over again. The old nipple, of course, would have to be cut out. Besides, the cost of the delay would amount to a great deal—perhaps more than the above cost to the manufacturer. So it is safe to say that the cost of welding would have been well over $100.

As already stated, about 5c worth of paste and a few minutes' time solved the problem nicely. The erecting superintendent whose pet application was a combination of glycerine and litharge and who had used that combination throughout this job was finally prevailed upon by one of the mechanics to try a standard manufactured paste. The rectifier was taken off, the paste was applied, the rectifier was screwed on, and since that time, up to the last time this writer heard of it, the joint has been as tight as the welded joint between the nipple and the generator.

●

Solving Belt Problems

Small belts are being increasingly used today, some of them being made of round leather, some of rubber, and some are V-belts. Not long ago this writer was confronted with a problem of providing such a belt, and since he was miles from any market and he did not have any leather he attacked the problem by making use of an old automobile inner tube, as indicated in the accompanying sketch.

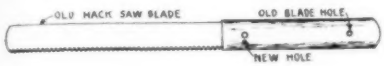


The first attempt at making an endless belt was a cut straight across the inner tube, as shown, but it was a bit "too short." It "worked," yes, but it was unnecessarily tight. A tight belt is hard on the bearings, causing them to wear and consume more power than they should. So the next attempt involved a cut at an angle as indicated by the words, "Just Right." This produced a belt of correct length. Obviously, by following this method it is possible to make excellent emergency rubber belts, of many lengths, cut of single old inner tubes.

If it is a V-belt that must be replaced temporarily, several belts of the above type, all of the same length, can be placed in the groove in the event that a single belt is not sufficiently strong. Simply place the belts in the same groove, one on top of the other.

A Good "Knife From a Hacksaw Blade

This sketch shows how to make good use of old hacksaw blades. Provide the end with a wooden handle, as indicated, and you are all set for a wide variety of cutting jobs that are otherwise handled with difficulty. For instance, this writer doesn't know of a better "knife" for



cutting gaskets, packings, for cutting through metal that is not get-at-able with an ordinary hacksaw, and so on endlessly.

There is a hole in the end of every hacksaw blade which hole can be utilized nicely for fastening the handle with a rivet as indicated by the words "Old Blade Hole." A new hole may be made by heating red hot locally and punching, for the second rivet. Or, make the handle large enough to entirely envelop the blade and insert two rivets, one above and one below the blade. This writer prefers the smaller handle, however, as indicated in the sketch.

To be sure, a "new" blade may be used as well as an old one where greater sharpness is wanted. But for most of the ordinary cutting jobs an old blade will do very well.

●

Wanna Make a Bet?

Said one mechanic to another, "Show me any inch of any folding rule, regardless of the length of the rule, and I will tell you how long the rule is."

Mechainic No. 2 didn't immediately understand what Mechanic No. 1 meant, but after it was made perfectly clear to him, it seemed incredible, and so, being a betting man, he offered to wager $2 that he could "fool" Mechanic No. 1. The bet was promptly accepted.

So mechanic No. 2 went away and soon came back with a small portion of a rule having a 25 on it. He had the remainder of the rule in a bag to prove to Mechanic No. 1 that he wasn't cheating.

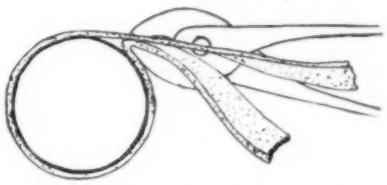
Mechanic No. 1 took the piece of rule, noticed that there was a 47 on the other side, added the two, and the answer is 72, which means, "72 inches." In other words, it was a 6 ft. rule. It is a fact that, regardless of their length, since holding rules are always "doubleheaders," the sum of the two opposite number always gives the length of the rule.

Mechanic No. 2 was dumbfunded until the method was explained to him. He then offered to pay the $2, saying that the lesson was "worth it." But Mechanic No. 1 refused the money because, as he said, "I was betting on a sure thing."

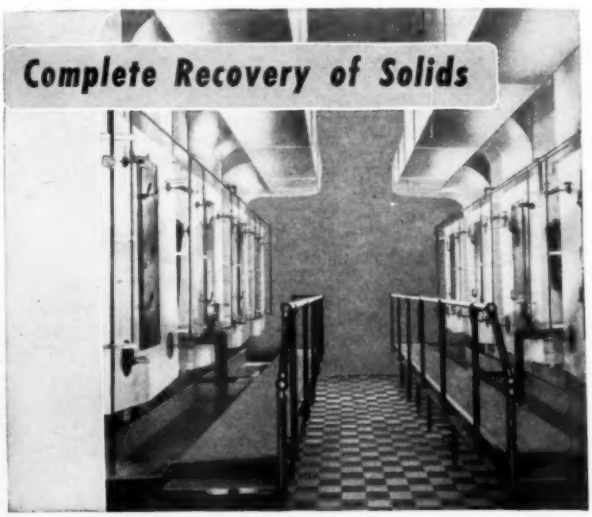
●

"Pipe Wrench" Kink

This sketch shows how easy it is to make a good "pipe wrench" out of a leather strap and a pair of pliers. Wrap the strap around the article to be turned, as shown, and grasp both ends of the strap close to the article with the pliers.



If it is desired to tighten the thread, turn clockwise, as in the sketch. If the thread is to be loosened, simply pull the other way just as with any regular wrench. This idea is of special value where the article is nickeled or polished and must not be scratched as the leather forms a cushion between the pliers and the metal. If a single thickness of leather is not strong enough, use two thicknesses, or more. Or, use any other strong flexible material – even rope.



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A PAGE DEVOTED TO THE DAIRY INDUSTRY IN CANADA

By **PHIL GLANZER**

CANADIAN CONSUMPTION LOW

Unrationed Dominion Drinks Only Half Glass More Milk a Day Than Rationed British

Ottawa, Ontario—"We are experts in welfare and we know it is being jeopardized by today's cost of living," Miss Kathleen M. Jackson told the royal commission on prices in presenting the report compiled by the Canadian Welfare Council. This group, a national organization of trained workers whose jobs bring them into contact with millions of Canadians, declared they are "concerned" about the effect of high prices on "a substantial part of the population."

"The most striking example," said the council, "was the reduced consumption of fluid milk. The average Canadian now drinks only half a glass of milk a day more than the rationed British consumer," the brief points out.

Statistics Are Gloomy

In 1946 urban Canadians drank .87 pints of milk, but this has dropped steadily until in August this year it was .61 pints of milk. They point out that milk now sells at 18 cents a quart in Ottawa, and they add: "There would seem to be real significance in the fact there is a recession in milk purchasing at this time."

The brief recalled that in a survey by the family service bureau in Hamilton the gap between prices and income had forced 50 per cent. of the group surveyed there to reduce milk consumption, while 21 per cent. reduced bread consumption, 55 per cent. bought less butter and 34 per cent. used fewer eggs.

Declare Health Menaced

"There is reason to believe that the ability of the average Canadian family to purchase dairy products in quantities adequate for healthful living is being threatened by the present prices of dairy and other products," the council declared.

"Every Canadian family needs to have adequate living accommodation, buy adequate quantities of food essential for health, secure enough clothing for decency and morale, and save a little for advancement, old age and protection against death or other emergency," the brief declared. Just the opposite is happening, it points out.

●

6-DAY DELIVERY PROBLEMS

Montreal, Que.—While health authorities are warning householders on correct handling of milk over no-Sunday delivery weekends in Montreal, the dairy workers union is studying the take-home pay effect of the order.

Dr. Adelard Groulx, director of the city's Health Department, said the delivery change need not cause any serious inconvenience. The following of normal health rules regarding conservation of foods will assure preserving milk, he declared.

For those without an ice-box or refrigerator, he suggested that Sunday's milk supply be obtained from a restaurant or grocery where usual precautions are taken for its safe preservation.

Meanwhile, officials of the National Union of Dairy Workers (CCL) said a meeting would be called some time in the near future to discuss the situation. Spokesmen indicated the union would ask for wage increases if the workers' wages were cut by the no-Sunday work order. To cover such a situation the union will ask for time and a half on Saturdays, spokesmen said. Sunday milk deliveries ceased on December 5th, 1948, according to local distributors.

●

ENDOWS FOUNDATION

London, Ont.—A new foundation, amounting to "several hundred thousand dollars," has been privately endowed by A. E. Silverwood, president of Silverwood Dairies Ltd., to promote religious, educational and charitable purposes in London and western Ontario."

The first application of the foundation's resources has been responsible for widespread expansion of Music Teacher's college of the University of Western Ontario.

Agreements signed recently brought Music Teachers' college under the support of the foundation, while the university retains control of the academic life of the college, including entrance requirements and curriculum.

CCF MEMBER SPEAKS

Ted Isley Lashes Milk Control Act for Disrupting Sales — Claims Trick Clause

Toronto, Ont.—Ted Isley, CCF member of the Ontario Legislature for Waterloo South, said recently that the Milk Board Control Act passed during the last legislature session "is disrupting" orderly marketing of milk.

The CCF Opposition will demand at the next session that the act be amended to meet farmers' needs, he said in a speech over the Ontario network of the CBC.

Mr. Isley, himself a milk producer, said that under former legislation, milk producers' negotiations with dairies were undertaken on a province-wide basis through the farmers' provincial organization.

See Trick Clause

"This new . . . act has changed all that," he said. "There is a trick clause in it which enables the dairies in any town or city to insist on bargaining only with the producers who actually sell milk to them—not with the provincial organization . . . they play one group against another and force poorer conditions on all of us."

The result was that producer groups were able to reach a new agreement with the dairies after weeks of negotiations. The problem was aggravated by the act that farmers were finding it harder to dispose of their milk due to high prices.

Mr. Isley said that farmers, despite rocketing production costs, were only getting about 10½c a quart for milk that costs consumers 18.

He claimed that since last April no regulations under the new Milk Control Act have any legal force because when the former act was repealed all regulations then in force died with it. No new regulations had been passed.

●

TIME BAD FOR RISE

London, Ont.—Dairy farmers from the London area were told recently by two visiting officials of producers' organiza-

tions that the present time was not a good one for insisting on higher milk prices.

"We don't want to increase our prices at the cost of curtailing our sales," declared Roy F. Lick, secretary-manager of the Ontario Whole Milk Producers' League, addressing the annual meeting of the London district cooperative milk producers.

Norman Martin, president of the St. Thomas Whole Milk Producers Association said, "Nothing has yet been settled about this year's prices. We have probably reached a peak and I think we should use a great deal of care before deciding to ask for higher prices for our fluid milk – it may be necessary to obtain more equitable rates for by-products.

"We are confronted with the danger of having very large surpluses with a smaller market for our products in 1948," Mr. Martin warned.

●

BOOSTS MILK CONSUMPTION

Montreal, Que.—Six-day-a-week milk delivery has slightly boosted milk consumption in Montreal which has dropped eight per cent in the last two years, a spokesman for the milk distributors said recently.

This drop was attributed to a continued rise in the cost of milk from 10½ cents a quart in 1946 to 17½ cents a quart today. Consumption in the same period declined from .75 pints per person in Montreal to .67 pints.

Claiming the public actually boycotted milk because of the price increase, the spokesman said the consumption drop would be greater except for the "Milk for Health" campaign sponsored by distributors and producers.

The inauguration of six-day-a-week milk delivery has improved the sinking milk consumption, he said, because consumers tend to buy more milk on Saturday "just to be sure they will have enough for Monday morning."

●

ESTABLISH NEW CO-OP.

Nova Scotia—The Yarmouth County Milk Producers Association in Nova Scotia has decided to establish a co-operative creamery and dairy in the county. Hubert Bain, Ronald Hamilton and Percy Crosby have been appointed to head an educational campaign in connection with the proposed organization.

Steps were taken to organize a campaign of education and meetings will be held in all county districts during January and February.

Decision to establish the co-op followed weeks of investigation by a committee of the association. The committee included Albert Whittaker, president of the Yarmouth County Farmers Association, and John Jensen of Wellington, who presented a report as to costs and other factors before the meeting.

The committe visited co-operative creameries and dairies in Pictou, Halifax and other counties of the province in order to get information. They presented glowing reports of the activities of milk and butter co-operatives in other districts.

In Pictou County the producers are getting 10 cents more per hundred weight for their milk than Yarmouth County producers, and they had a 20 cent rebate coming to them, thus making a total gain over Yarmouth of 30 cents per hundred, Jensen said.

Machinery for the new plant could be purchased at $25,000 the speaker said. This amount would include the most modern pasteurizing machinery and all other equipment necessary. Other costs would bring the amount of the project up to $50,000.

At the present time, about 500 Yarmouth County farmers are milk producers.

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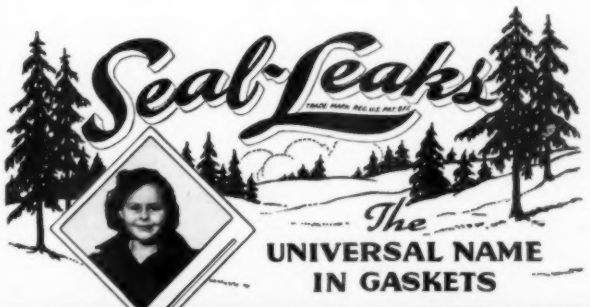

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ALBERTA MILK CONTROL

G. M. Blackstock Gives Reasons for Establishing Fixed Prices in Western Province

Edmonton, Alta.—Milk prices come under control in Alberta by the Board of Public Utility Commissioners but the basic principles of such public utilities administration as commonly applied to natural gas rates or common carrier pipeline rates, are not and can never be applied to milk, G. M. Blackstock, K.C. chairman of the Board told a recent meeting of the Edmonton branch, Agricultural Institute of Canada. He was delivering an address on some aspects of public utilities control in relation to agriculture.

If there was but one milk distributor to a city, utility practice of determining capital investment, depreciation of plant, operating costs and use, could be applied but not where several plants operated under different set-ups. Because of public reaction, zoning for delivery was not practical, would not be attempted except by specific direction of the legislature. He said any saving through having only one milk wagon on a street would probably be fractional and too small to pass on to the consumer.

More than a century ago the common law of England defined as a public utility a public service of monopolistic nature, dependent upon a franchise of some nature, and declared by legislation, to be a public utility. The courts held that if a man enjoys a monopoly in a field, he must provide service "at a reasonable charge." A famous Illinois court decision held that such monopolies must submit to control "by the public for the common good."

The supply of milk is not an individual problem, but a social problem of magnitude, Mr. Blackstock said. He pointed out that under Alberta control of milk, the prices fixed for any milk control area, were minimums, such as the present $4.25 per cwt. which the Edmonton distributors must pay producers of that milkshed, and the 17 cent per quart charge to consumers in Edmonton.

He said that milk control was brought about as a result of the depression in 1933. Unemployed consumers had bought cheap cows, pastured them on the lanes and peddled the surplus to neighbors, so there was price cutting.

Legitimate dairymen, with money invested in lands, buildings, herds and growing crops from which they got a return in the form of milk delivery cheques, faced bankruptcy and the public had an inadequate supply of inferior quality milk. So the government decided to have the price of milk fixed.

In seeking information as to unit costs, milk production cost surveys had been conducted annually at fifty to one hundred farms and averages taken. There were some farmers who used family help, others whose operations were quite different, but he knew of no other way to look for costs.

The price of a product like milk could be controlled on a falling market. He reminded consumers that in the past ten years the price of milk, under controls, had advanced less than prices of almost any other product. He wondered whether the fixed price should be continued under present conditions, and whether the time was not coming when milk should be allowed "to reach its own economic level?"

However, Mr. Blackstock expressed the conclusion that some control of milk must be retained in the interests of the producer and consumer.

While no reference was made to the changes effected in Ontario milk regulation whereby a minimum price that must be paid to the producer, is fixed, and that paid by the consumer left to find its own level on the basis of consumptive demand, it seemed possible that some change of the sort might be considered or suggested for Alberta.

Each time the board has held public hearings of applications by producers for higher returns, consumer organizations have been quick to fight price increases. This may explain why distributors have not attempted to charge the public more for milk than the fixed minimums.

In recent months milk prices for Drumheller, the coal city, and for Turner Valley oilfield towns, have been advanced by the board to 20 cents a quart.

●

WOULD CHANGE CONTRACT DATE

Toronto, Ont.—Demand that wages paid by milk farmers to labor be negotiated at the same time as the price paid to producers for milk was made recently before the milk arbitration board. Sitting under the chairmanship of Judge J. B. Moon, the board heard a brief from the Toronto Milk Distributors' Association which argued that producers costs "are dependent quite largely" on labor demands.

It argues that negotiation of wages and price at the same time would prevent any possible consumer price increase becoming "the unfortunate municipal football it so often does, to the detriment of not only distributors but producers as well.

The brief calls for a change of date to February 1 for expiration of the contract between distributors and producers. It argues the present date of November 1 is unsatisfactory "because of the inevitable adverse publicity that any changes in consumer prices receive during the time of municipal elections.

GIVES FORCAST FOR 1949

Duplan, NDCC Prexy, Predicts Greater Shortage of Milk this Year in Creamery Talk

Toronto, Ontario—Canada's milk shortage, with its resulting lack of butter and cheese, will be worse than ever next year, J. H. Duplan, president of the National Dairy Council of Canada, told members of the Ontario Creamery Association.

Speaking at the first session of the convention of the Ontario Creamery Association at the Royal York Hotel, he stated that the demand for milk and its products would be greater than this year, and the supply almost the same.

Reasons for the shortage, he said, are the sale of milk cows to the United States, the continuance of controls on the price of butter, and the export of cheese to Europe.

Total production this year, he predicted, will be about 16,700 million pounds on a per capita basis the lowest for any year except 1929. He estimated Canada's domestic requirements at 16,936 million pounds, over 20 million pounds more than will be produced.

Production of creamery butter for 1948 was 5,000,000 pounds less than in 1941, and about 25 million pounds short of the demand, he said. With 15 million pounds of butter being imported, this means a shortage for the year of 10 million pounds.

He said that nearly half Canada's milk output goes into butter-making, but, under controls, milk used in butter pays less than that used in other dairy products. This has resulted in many farmers turning from dairying to other types of farming or reducing their herds, he said.

●

MASTITIS TREATMENT

A very important aspect of the treatment of mastitis quarters with penicillin is mentioned in an article appearing in the July issue of the New Zealand Dairy Exporter. This article, "Penicillin – the Answer to Strep Mastitis?", refers to an address by Dr. E. R. Whitehead, chief chemist of the Dairy Research Institute, during which he issued a warning that milk from cows under treatment with penicillin should on no account be sent to a cheese factory during the period of the treatment and for at least a day thereafter, since penicillin has an effect upon starter action.

In view of the fact that penicillin is now being used extensively in Alberta for mastitis treatment, officials of the dairy branch of the Alberta department of agriculture suggest that producers would do well to keep this advice in mind, and avoid delivery of milk to cheese plants from cows under treatment with penicillin.

PORTRAIT OF A DAIRYMAN

(Continued from Page 36)

His plant furnishes the fluid milk consumed in this city of 6,000 persons, as well as in 10 nearby communities. His ice cream mix supplies ice cream for local outlets, for routes in a dozen towns, and also the fluid mix for a number of other dairy plants. Each year his plant churns 400,000 pounds of butter.

Roy Bryngelson's butter won top prizes at the 1948 North Dakota Dairy Show in Jamestown.

Roy Bryngelson last winter went up to Manitoba and brought down six carloads of purebred Holsteins to sell to his patrons and neighbors.

Roy Bryngelson and his creamery started the first artificial breeding association, Valley Breeders, in North Dakota. (However, some North Dakota dairymen previously had been serviced by a Minnesota association, which served herds on both sides of the Red river.)

Roy Bryngelson in 17 years has seen his co-op grow from a dubious financial footing to current physical assets of nearly $300,000.

He has written the checks which have returned to patrons, in 17 years, $188,000 in CASH dividends.

He has brought in carloads of cream cooling tanks, as part of a quality campaign which is continuous and insistent—quality preached in every printed communication to patrons, in every annual meeting, in every fieldman's visit.

This winter construction is under way on a $100,000 addition to the plant. Roy Bryngelson, in lumberjack shirt and rumpled trousers, can be found up on top with the workmen, or down in the basement, spotting a future water tank or steam line. He has helped set up machinery, helped lay bricks, helped install motors. He has done that while continuing the book work started 17 years ago.

Then, just to cap the climax of irony, Roy built himself a new home this past summer—working on it himself each Sunday. Also, he has time to serve on the church council, to be an officer of the North Dakota Dairy Industries Association, an officer in his lodge. (For the erstwhile Roy of the rooming house today has a lovely wife, two daughters and a son.)

The Barnes County co-op has always been affiliated with Land O' Lakes Creameries, and Bryngelson has a conscientious regard for Land O' Lakes policies, for its reputation for quality, for its constant quality improvement campaign.

Bryngelson's philosophy is interesting. He feels that he and his co-op have a definite obligation to three groups—the farmer-producers who want the best possible market, the consumer who deserves the best possible food product, and the community in which this business owned by 350 farmers finds a happy economic and social climate.

The new addition includes complete slaughtering and processing equipment for meat, from outdoor corrals to 636 lockers. Yet the Barnes County Co-operative Creamery Company will slaughter only for its farmer-members and other patrons. And lockers will be rented only to members and patrons.

"That equipment is a convenience to our members—we do not choose to compete with other butcher shops and locker plants in the community," says the manager.

That's Roy Bryngelson for you—a man blunt in speech, candidly honest, the kind of a manager whom intelligent farmers trust and admire. They cheered like high school kids when "that butter of ours" won top prize at the state show. They come into the creamery office now and then to tell Roy how "that Rockwood cow you got for me from up at Winnipeg is certainly doing mighty fine."

And the other day when the Valley Breeders' first "test tube baby" arrived, farmers stopped by to admire, and to watch a state agricultural college photographer take pictures of the wobbly black and white infant whose daddy has never been farther west than Minneapolis.

A better plant, better livestock, better care of milk and cream on the farm—Roy Bryngelson has carried his creed into action, and his patron-members know and appreciate it.

●

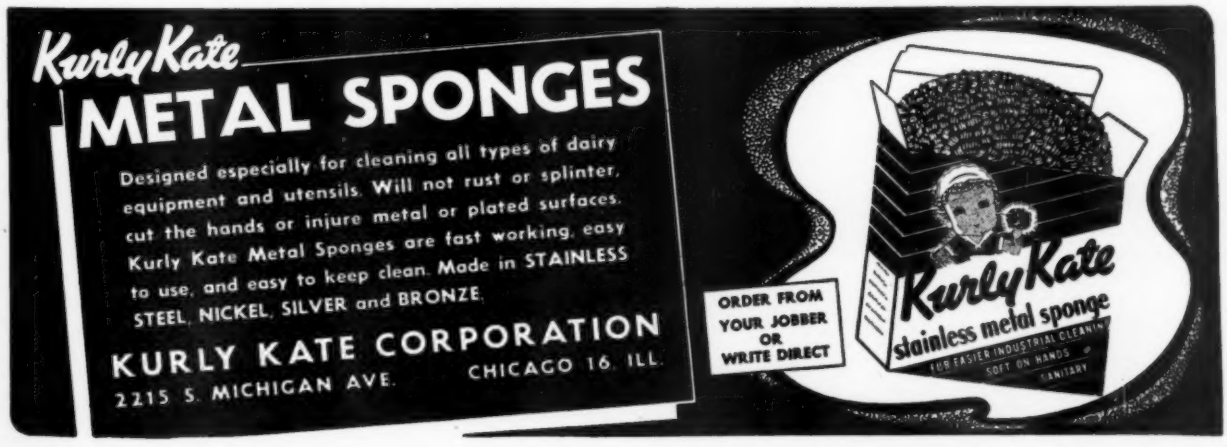
PREDICTS BUSINESS INCREASE

(Continued from Page 32)

tional product at a slightly higher ratio up to $225 billions. Then, at about the same ratio, $59 billions of total investment would correspond with $260 billions of gross national product." This last figure is Mr. Newbury's prediction for 1949.

A shooting war, he adds, a boost in taxation affecting private investment, a change in Federal Reserve credit policies, a major change in the wholesale price level, or a serious break in farm prices (most unlikely under present government policies) would change the picture.

In conclusion, Mr. Newbury's forecast points out, "One final consideration should receive attention: We have enjoyed virtual capacity production for two years, and this forecast anticipates another year of full production. Such a long period of capacity production and employment is unusual, to say the least, and it is natural that business men should be fearful of near-by collapse. Certainly the current abnormal demand for housing, automobiles, steel and copper will be satisfied someday, and a decline in investment spending and in consumer sales will then begin. But the decline will be slow and moderate; there is little reason to fear the kind of collapse we had in 1921 or 1929."


Kurly Kate
METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL, SILVER and BRONZE.
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2215 S. MICHIGAN AVE. CHICAGO 16, ILL.
ORDER FROM YOUR JOBBER OR WRITE DIRECT
Kurly Kate
stainless metal sponge

CCC PROMOTION

R. L. PERIN

R. L. Perin, formerly Central Division sales manager of Continental Can Company, has been named general sales manager, with responsibility for the sale of metal containers in all three domestic metal container divisions of the company, T. C. Fogarty, vice president in charge of sales, announced today.

Mr. Perin, a graduate of the University of Cincinnati, joined Continental in 1928. After field sales work, he became the Cincinnati district sales manager, and, in 1942, the Pacific Coast sales manager. In 1944 Mr. Perin was appointed Central Division sales manager.

In his new capacity as general sales manager, Mr. Perin will shortly transfer to the company's head office in New York; in the meantime he will make his headquarters in Chicago.

●

NAMED AS DIRECTOR

Mr. C. C. Smith, President of the Waukesha Foundry Company, Waukesha, Wisconsin, announced the election of Gilbert R. Funk as a director of the company and his appointment as Works Manager.

Mr. Funk has been associated with the company for twenty years and has been in charge of manufacturing and engineering for the pump division of the company for the past ten years. During this time, he developed the present line of Waukesha sanitary pumps, the Waukesha Selectaspeed, a variable speed drive, and the new Waukesha sediment tester. These items are used extensively in the dairy and food processing industries.

In his new position with the company, Mr. Funk will be in charge of all manufacturing and foundry operations at both the Waukesha and Watertown plants.

●

BEATRICE FOODS REPORT

Chicago, Ill. – Beatrice Foods Co. reports for the three months ended November 30, 1948, the third quarter of the company's fiscal year, net profit of $678,658 after all charges and federal taxes, equivalent after preferred dividend requirements to $1.23 a share on 511,792 common shares outstanding. For the corresponding quarter of last year net profit was $317,565, equivalent after preferred dividends to 52 cents a common share.

For the nine months ended November 30, 1948, net profit amounted to $2,306,-349, equivalent after preferred dividend requirements to $4.21 a share on the presently outstanding common stock against $1,984,056 and $3.57 a share for the same period of last year.

Net sales for the quarter were $48,-260,048 compared with $46,372,560 for the same quarter of last year. For the nine months, net sales totaled $148,959,-948 against $138,986,911 for the same period of a year ago.

From July and into November, the company experienced a severe decline in the butter market, resulting in losses in the butter department through both the second and third quarter, C. H. Haskell, president of the company stated.

FEBRUARY PLENTIFULS

Eggs and cheese appear at the top of a list of more than twenty foods expected by the U.S. Department of Agriculture to be plentiful United States during February.

Fruits and vegetables, in fresh, throughout the greater part of the dried, and processed form, as well as fish, honey, nuts, and other foods appear on the February plentifuls list. Eggs and cheese are recommended by USDA for special emphasis during the month.

OF EVENTS TO COME

Oklahoma Dairy Products Institute, Inc., will hold its annual convention at the Skirvin Hotel in Oklahoma City, February 6, 7, and 8, 1949. Edd L. Hisel, secretary-treasurer.

Texas Dairy Products Association—Annual convention, Hotel Texas, Fort Worth, Texas, February 9, 1949. J. C. Davison, Jr., 606 Insurance Bldg., Fort Worth, Manager.

Pennsylvania Association of Milk Dealers—Seventeenth annual convention will be held at the Benjamin Franklin Hotel in Philadelphia, Pa., February 22 and 23, 1949. Executive vice-president, Benj. G. Eynon, 324 Telegraph Bldg., Harrisburg, Pa.

Dairy Industry Week. Kansas State College, Manhattan, Kansas, February 22, 23, 24, 1949. Prof. T. J. Claydon, Department of Dairy Industry, Harrisburg, Pa.

Michigan Allied Dairy Association—Annual convention, Grand Rapids, Michigan, March 2-4, 1949. L. N. Francke, 2010 Olds Tower Bldg., Lansing, Mich., Secretary.

West Virginia Dairy Products Association convention will be held August 1 and 2, 1949 at the Greenbier, White Sulphur Springs, West Virginia. John J. Slavins, secretary, 467 Chestnut St., Morgantown, W. Va.

World Dairy Congress—Twelfth Meeting, Stockholm, Sweden, August 15-19, 1949. Waldemar Ljung, Postbox 642, Stockholm, Sweden, Secretary.

Louisiana Association of Ice Cream Manufacturers—Convention at the Washington-Youree Hotel, Shreveport, La., March 27, 28, 29, 1949. John P. White, secretary-treasurer, Pelican Creamery, New Iberia, La.

NAMES NEW SALES HEAD

ROSS J. WINNING

Ross J. Winning has been appointed general sales manager of Sheffield Farms Company, Inc., F. J. Andre, president, announced today. Mr. Winning is a director of Sheffield Farms and was formerly city production manager for the company. He has had an extensive background of experience in fluid milk and milk products organizations.

Mr. Winning, who resides at 85 Jefferson Avenue, Franklin Square, Long Island, is married and the father of two children, Rachel and James. He is a member of the Floral Gardens Civic Association, the New York State Milk Sanitarians and the Metropolitan Dairy Technology Society.

●

BRITAIN LOOKS FOR CHEESE

Glasgow, Scotland – (*Special to the "Review"*)–Fears for the maintenance of the current British cheese ration have induced the Government to open negotiations with American exporters, despite the fact that American prices are higher than Canadian. The necessity for this move has developed through the prospect of a 40% drop in Canadian cheese deliveries, and the inevitable reduction of the British ration unless additional supplies could be obtained from some alternative source. America presents the only such open source at the present time, apart from Australia and New Zealand.

●

EYE U. S. MILK MARKET

Ottawa, Ont.–George Drew, Progressive Conservative leader, recently advocated the opening of the U. S. market to any Canadian agricultural products that can be sold there.

Mr. Drew held a news conference after being sworn in by Dr. Arthur Beauchese, clerk of the House of Commons, as M.P. for Carleton.

"I can see no reason why the markets of the U. S. should not be open to us for food and other products they desire," he said.

Told that removal of the milk embargo would add from five to seven cents a quart to the price of milk in Canadian cities, he said this would not be true of Ontario.

"With the Milk Control Act Ontario has and the procedure for bargaining between the producer and the distributor, it wouldn't produce any such result," he claimed.

Guy Speirs Retires

Widely Known Veteran Wisconsin Dairyman, Abbotts Dairies Official, Withdraws from Active Business

Philadelphia, Penna.—Guy Speirs, for 54 years one of Wisconsin's most widely known dairymen, retired on January 1 from his position of General Manager of the Western Division of Abbotts Dairies, Inc., Cameron, Wisconsin.

GUY SPEIRS

Mr. Speirs' career in the dairy industry was brilliant and colorful. It started in 1890 when he organized the Washington Cooperative Creamery near Eau Claire, Wisconsin, which is still operating today. In 1902, he founded the Eau Claire Creamery Company which developed into an organization of 12 country creameries.

In 1922 he organized the Cameron Creamery Company, Cameron, Wisconsin, which he sold to Abbotts Dairies in 1927, and became associated with that company in the capacity of General Manager for the Western Division.

During his half century in the business, Mr. Speirs made many commendable contributions to the dairy industry for which he received public citations. Among them was recognition from the American Dry Milk Institute, Inc. and the University of Wisconsin.

E. C. SCHULTZ

One of Mr. Speirs' most enthusiastic interests has long been the education of farm boys and girls in the field of agriculture and dairying, and in the past few years he has sponsored annual farm events for young 4H and FFA members where prizes of young pure bred bulls were awarded.

Succeeding Mr. Speirs is E. C. Schultz, who first became associated with the veteran dairyman in 1917, and in 1922 helped him organize the Cameron Creamery. Mr. Schultz, the father of two children, is President of the Bank of Cameron and a Director of the American Dry Milk Institute as well as a leader in the civic affairs of his community.

Veterinarians Honored

High tribute was paid to some 2,000 veterinarians, now back in civilian life, who helped the armed forces score a "triple knockout" against disease during World War II.

Brigadier General James A. McCallam, Chief, Army Veterinary Corps, said the nation owes "a great and unrecognized debt to the more than 2,000 skilled veterinarians who left their practices during World War II."

General McCallam listed three disease-fighting achievements which he said were unparalleled in any previous military conflict.

Rigid Army veterinary inspection of all meat and dairy foods issued to troops prevented a single widespread outbreak of disease traceable to such products.

Prevented Disease

Many thousands of horses, mules, war dogs and pigeons were trained and utilized in military operations without a serious outbreak of disease among the animals. Rabies and equine encephalomyelitis, both responsible for consistent heavy losses in privately owned animals and a threat to human health as well, were conspicuously absent from the military picture. Prevention of these diseases was credited by General McCallam to research, vigilance and strategic use of vaccines.

Military governments, staffed with Army veterinary personnel, quickly "revitalized" livestock health services in war-torn nations and thereby protected these countries against devastating animal plagues which nearly always have followed major conflicts in the past. Without such aid, livestock populations might have been wiped out by disease.

"The Veterinary Corps still is performing all the services it did in wartime, but its successful operation is being hampered by a critical shortage of personnel," General McCallam added.

An Urner-Barry Service Feature . . .

SPECIAL WEEKLY STATISTICAL REPORT

A Careful Analytical Study of of the position of Butter, Eggs and Dressed Poultry . . .

By Mail or Wire . . . Write for Sample Copy

URNER-BARRY COMPANY

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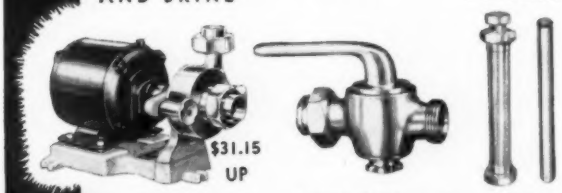
STAINLESS STEEL **THOMSEN** NICKEL ALLOY

SANITARY AND BRINE VALVES LINE FILTERS



PUMPS FITTINGS TUBING

L. C. THOMSEN & SONS, INC., KENOSHA, WIS.

Sanitary Equipment for the Processing Industries

USING OUR SEPARATOR • ITEMS OF INTEREST SKIMMED FROM HERE AND THERE

Truck Refrigerator

KOLD-TRUX, Incorporated, of St. Louis, Missouri, announces a new KOLD-TRUX unit for front end motor drive with DIVCO and similar cab-over-engine trucks for milk, ice-cream, meat and frozen foods.

This unit, built in various horse-power capacities is designed to keep body temperatures at 35° F. to 50° F. for milk and meats, and minus 10° F.

to minus 15° F. for ice-cream and frozen foods, either on the short city or country wholesale runs, or on house-to-house retail delivery. The unit is located under the right front platform of the truck.

Power to drive the KOLD-TRUX UNIT while on the road is derived from a sheave mounted on the engine crankshaft. Through belts power is transmitted to a shaft located to the right and parallel to the engine crankshaft. This shaft is directly connected to the fan hub assemble which contains an overrunning clutch. Unit speed is governed by truck engine speed which is limited by a governor. Unit speeds may be increased or decreased in relation to governor speed. Compressors are of the high speed type and may be driven up to 1800 RPM with safety.

Electric motor is provided for overnight pull-down, when truck is not operating on the run. This motor plugs in at the right front side of the engine, under the hood When the motor is plugged in, an unindirectional clutch in the fan pulley allows the pulley to over-ride the shaft. The same is true when the unit is operating off the truck engine, an unindirectional clutch in the motor pulley allows the armature of the motor to stand still.

•

Wall-Washing Machine

QUAKER MAINTENANCE COMPANY, INC., announces the development of Handeasy, a new attachment which now permits successful washing, by controlled moisture, of any washable surface.

Handeasy (patent applied for) can be used for washing mouldings, corrugated metal ceilings, pipe risers and rough brick.

The attachment, which is entirely mechanical, and uses no electricity, is held in the hand. Cleaner and rinse are fed into the washer by fingertip control.

Control is through a valve constructed on a small aluminum plate which fits inside the palm. A synthetic sponge, manufactured in such a manner that it can be attached to and detached from the valve assembly, is the basis of feeding the cleaning solution and rinse. Fingerless terry cloth mitts are used over both sponge attachments. The mitts are removed when saturated by dirt, and replaced with clean ones. These mitts are washable.

Additional information may be obtained by writing to Quaker Maintenance Company, Inc., care of this publication.

Paint Guide

SLIDE RULE tactics are employed by American-Marietta Company, Chicago paint manufacturer, to simplify the plant maintenance man's task of selecting paints for industrial uses. The new gadget, called the Valdura Painting Guide, is operated like a slide rule to gain paint information.

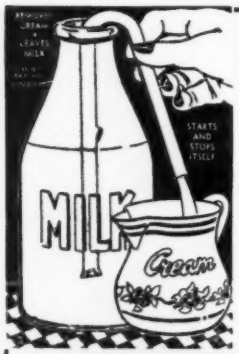
The maintenance man sets the slide at "surface to be painted" and small win-

dows show the preparation required for the surface, the primer recommended, the correct finish coat, colors, characteristics of the finish, and the proper thinner.

Measuring four by nine inches, the plant superintendent has in condensed form notes on most industrial painting problems.

Typical uses noted by the painting guide for specific Valdura finishes include acid rooms, street and aisle markings, buried pipe lines, galvanized metal, stacks, structural steel, and others.

Such factors as exceptionally hazardous jobs, extreme temperatures, and unusual atmospheric conditions, are provided for by the painting guide. A detailed instruction sheet is included. A copy of the paint guide may be obtained by writing to the American-Marietta Company, in care of this publication.



AN EFFECTIVE BUSINESS BUILDER
Useful — Interesting

MAGIC CREAM SIPHONS for home use, remove cream from bottled milk to use with coffee, cereals and desserts.

PLEASE OLD CUSTOMERS — WIN NEW ONES

Leading dairy firms find Magic Cream Siphons a welcome sale booster aid. Homes using a cream siphon consume more milk when they learn how many foods are improved by the liberal use of milk instead of water in preparing.

Free sample for round or square bottles
Glass $15.00 per gross or $100.00 per 1000
Aluminum $17.50 per gross or $115.00 per 1000

Complete Satisfaction Guaranteed

MERIT MANUFACTURING COMPANY
3455 EAST 150TH STREET CLEVELAND 20, OHIO

Better **DRY MILK**
AT LOWER COST
DRY MILK MACHINES
Built in Five Sizes

The patented, glass-smooth, "20-year cylinders" give years and years of maximum production of a superior dry milk at the lowest possible cost.

Many other exclusive features insure long life with low steam and power costs.

Complete details upon request.

OVERTON MACHINE COMPANY
DOWAGIAC MICHIGAN

Dairy Truck

VANETTE ANNOUNCES the Dor-Tu-Dor for E-Z Route Dairy Service. The Dor-Tu-Dor has a 42 case (round bottles) capacity. Its drop frame is designed for the average multi-stop dairy route. Mounted on the Ford

F-3 chassis, the Dor-Tu-Dor offers low initial investment and economical operation according to the manufacturer.

The wheelbase of the Dor-Tu-Dor is 108″. With this shorter overall length, the Dor-Tu-Dor is easy to park, store, and handle in traffic.

The all-steel welded body of the Dor-Tu-Dor is undercoated to deaden sound and resist corrosion. The driver's compartment has a headroom of 76½″ in the aisle.

The front doors of the Dor-Tu-Dor are all steel, welded jackknife type with piano hinges. The double 15″ rear doors have safety glass and refrigeration type seal against dust. Further information is available from Vanette, Division of Brooks & Perkins, care of this publication.

●

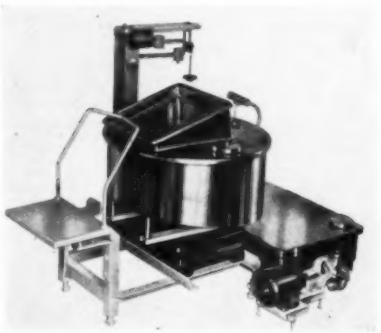
Weighing-Receiving Units

DAMROW BROTHERS COMPANY, Fond du Lac, Wisconsin, announces the development of a new "Junior" Stainless Steel Weighing-Receiving Unit for use in small dairy plants.

Available in varying standard arrangements and combinations, the "Junior" units may include: can dump, weighing tank, scale, receiving tank, sanitary pump, complete sample attachment, and all piping and accessories. Special attention has been given to modern streamlined design and to sanitary construction in heavy stainless steel.

A table-type of can dump is standard equipment, but this can be equipped with a regular conveyor if desired. The support frame, part of the can dumper, is adjustable to provide for various types of scales, either beam or dial.

Round Weigh tanks of 428-pound capacity, are equipped with strainer, anti-splash strainer cover, and sample holes. Louver type anti-splash grid, also of stainless steel, is optional equipment. Stain-



less Steel receiving tanks are 250-pound capacity and are complete with pitched cover having 3½″ inlet hole and 5″ observation hole (with cover); adjustable feet and 1½″ outlet hole are standard. Sample attachment is optional. This is available complete with removable sample bottle cabinet, test bottles, dipper, corrosive sublimate tablets and monthly milk sheets. Scale, pump, fittings and accessories are also optional equipment. A new bulletin describing and illustrating the units may be obtained by writing to the manufacturer, Damrow Brothers Company, in care of this publication.

●

Rusted Surface Primer

THE WILBUR & WILLIAMS COMPANY, Boston, announces a combination pretreatment and primer for metal, called Rust-O-Primer. The product is applicable over wet or dry, clean or rusted metal including steel, aluminum or galvanizing, according to the manufacturer. Its purpose is to provide a hard, paintable foundation for any type of paint.

Further information may be obtained by writing to the manufacturer, care of this publication.

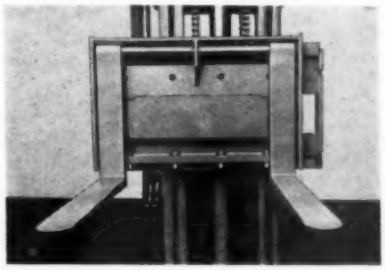
●

Fork Truck Innovation

LEWIS-SHEPARD PRODUCTS INC. have developed side shifting attachment for the carriage of any of their power fork trucks.

When quarters are tight or loads have to be spotted exactly, the forks can be shifted horizontally.

Shifting of forks is controlled by a hydraulically operated "deadman" type le-



ver, located on the operator's cab. The forks can be shifted and held by as much as 4″ to the right or left of center position. Total travel is thus 8″.

The movable portion of the carriage is mounted on 12 hardened alloy steel roller bearings to take horizontal and vertical thrusts; this reduces friction and permits a more compact design.

Adjustable flow valves on the carriage control the speed of the side shifting.

Attention is called to the fact that the necessary hydraulic lines are mounted with double take-up sheaves, which reduces possible complications by insuring proper tension of the lines at all points within full lifting range of the carriage.

For Finest Texture and Flavor

MARSCHALL COTTAGE CHEESE COAGULATOR

in tablets

Economical — easy to use the right amount of rennet every time. Use 1 tablet for each 1000 lbs. of milk. 100 tablets 84 at your dealer's.

Marschall Dairy Laboratory, Inc.
MADISON 3, WISCONSIN

IF you have trouble with your chocolate milk
you are not satisfied with its flavor
the cost is higher than you can afford
the quality is not up to par

Tell us your trouble . . .

Quality First
Forbes

will find the answer for you. The prescription will cost you nothing.

Write for Free Sample — Mak · Your Own Taste Test!

The Benjamin P. Forbes Co., 2000 W. 14th St., Cleveland 13, Ohio

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25c additional in the United States.
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When replying to any of the following keyed advertisements please address replies to:

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175 CHAMBERS STREET NEW YORK 7, N. Y.

(The deadline for Classified Advertising is the 10th of the month preceding publication.)

No classified advertising will be accepted to run with borders or special spacing. All such advertisements are considered "Display" advertising and will be billed at regular display advertising rates. (Rates and mechanical requirements on request.)

FOR SALE — EQUIPMENT

FOR SALE—At our Staten Island Warehouse and Shop we have a good selection of Pasteurizers, Coolers, Bottle Washers, Bottle Fillers, Can Washers, Storage Tanks, Heaters, Separators, Weigh Cans, Filters, Ice Cream Freezers, Homogenizers, Vacuum Pans, Churns, Pumps, etc. Save money by considering good Used and Reconditioned Equipment. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. Telephone MUrray Hill 2-4616. 2-M

"40" Suspended Centrifugal, American Tool Machinery Company, complete with imperforated stainless steel basket, stainless steel covered spindle, stainless steel clad curb, with free wheeling drive, skimmer, stainless unloading plow with saw-toothed edges, for operation on 40 H.P., 220/440 volts, 3 phase, 60 cycle, A.C. main motor drive to be 1800 R.P.M., with unloading motor to operate basket at 50 R.P.M. Address all inquiries to P. O. Box 7929, Philadelphia, Pa. 2-M

FOR SALE—6-16 Cherry-Burrell Filler, Stainless Bowl, with Dacro or plug cappers. Fills from ½ pints to 2 qts. Factory Rebuilt. Also, 6'—3 section 36—1" tube surface cooler with Stainless Steel Covers. Also, Ideal and Vendall Milk Dispensers. Pilfour Dairy Farm, Inc., Neshanic, New Jersey. 2-M-2

FOR SALE—Mojonnier Stainless Steel Direct Expansion Cabinet Cooler with 4 wings each 24 tubes high, also Cherry-Burrell Junior Cabinet Cooler with 7 wings each 36 tubes high and Cherry-Burrell Senior Cabinet Cooler with 11 wings each 36 tubes high. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 2-M

FOR SALE — 2 - 300 gallon coil pasteurizer vats, good condition, price $200.00 each, tin copper. 1 - 200 gallon coil pasteurizer vat, just been retined, price $200.00. 2-5x5 old style Baker ice machine, price $150.-00. Wellington Creamery, Wellington, Texas. 2-M-2

FOR SALE — EQUIPMENT

FOR SALE—5x5 and 6x6 Ammonia Compressors 7½ and 10HP V-Belt Drive with twin condenser and receiver $1,500. (can be purchased in part) 200 gal. Pfaulder LoVat, new valve $350. 750 ft. 1¼" H.D. Hardening Room Coils $350. 236 ft. and 270 ft. 1¼" Cooler Coils $100. each. 150 Ice Cream Cans 20 qts. 75c each. Wire Case Truck $25.00. 5-40 qt. Ice Cream Shippers $10.00 each. 17 Wire Ice Cream Trays $1.50 each. M29 DeLaval Separator $100. 500 lb. Churn $200. (needs door repair). Butter Printer, Knives 10 Friday Boxes $50.00. 2 Sec. 4 ft. Cooler and Troughs $50.00. Torsion Balance Scales $15.00. Can Steamer $10.00. Milk Pump $25.00. Bristol Recording Thermometer (needs repair) $25.00. R.G. Wright 3 Brush Washer $35.00. 23 Gr. ½pt. and 32 Gr. qt. Round Bottles Blown lettered Lakeview $3.00 Gr. 15 Gr. qts., 3 Gr. pts., 3 Gr. ½pts. Round Bottles Red lettered Lakeview $2.50 Gr. 200 Wire Cases qts., pts., and ½pts. 50c each. 50 10-gal. Milk Cans $3.00 each. 12-can Can Rack $20.00. 500 sales books printed Lakeview $15.00. 5½M. Stock print Qt. direct fill Ice Cream Cartons $15.00 per M. 44 M. Direct fill pt. Ice Cream Cartons labeled Lakeview $10.00 per M. Dodge 1946 Panel 20 M. miles $1150. All articles in good condition unless otherwise mentioned. Contact D. B. Rice, 103 Bryant St., Battle Creek, Michigan. 2-M

FOR SALE—Brand new Homogenizer. Creamery Package 800-Gal. per hour Multi-Flo with pump. This machine was purchased two years ago and has never been installed. We have no use for it and will sell at a price that is right. Connecticut Milk Producers' Association, 990 Wethersfield Ave., Hartford, Conn. Phone Hartford 7-5233. 2-M

REBUILT — Pasteurizers, Milk Coolers, Bottle Fillers, Ice Machines, Plate Coolers and Heaters, Homogenizers and Bottle Washers. Send us your requirements. Ohio Creamery Supply Company, 701 Woodland Ave., Cleveland 15, Ohio. 8-M-t.f.

FOR SALE — 1 Viscolizer, 1941, Model No. 441, 400 gal. per hour. 1 R.G.Wright Bottle Washer, Serial 946, 6 wide, 40 bottles per minute, V belt drive. 1 - 150 Camel Washer, 2 motors, 1½ cans per minute. 1 Stainless Steel Filler Bowl and Valves for Model G 70. Warners Dairy, Inc., Red Lion, Pa. 2-M

FOR SALE — EQUIPMENT

FOR SALE—Reconditioned and guaranteed Mojonnier stainless steel, 12 Spout Vacuum Filler and Capper, Model 90RH for one-half pints, pints, quarts and one-half gallons. Will handle up to 90 bottles per minute. Complete with vacuum pump; inlet and outlet conveyor with stands and stainless steel covers; and stainless steel accumulating table with separate drive. PRICED LOW FOR QUICK SALE. The Filter Paper Company, 2460 S. Michigan Ave. Chicago 16, Ill. Telephone CAlumet 5-8900. 2-M

FOR SALE — 100 gallon Stainless Steel Creamery Package Spray Pasteurizer. Excellent condition and very reasonable. Jewart Brothers, Chaffee, N. Y. 2-M

FOR SALE — Viscolizers and homogenizers. Completely rebuilt and guaranteed. With standard or late type stainless sanitary heads and pressure valves. Bulletin and prices on request. Otto Biefeld Co., Watertown, Wisconsin. 2-M

FOR SALE — One Sturdy-Bilt four wide bottle washer. Has been used three years, replaced by larger machine. In A-1 condition. 18 to 24 bottles per minute. $600.00. Meyer Dairy Company, Basehor, Kansas. 2-M

FOR SALE—One 300 gallon R. G. Wright Two Compartment Visco-Creamvat of all stainless steel construction with cooling coil in jacket. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 2-M

FOR SALE—Complete dairy equipment — pasteurizers, bottle washer, conveyor, cheese vat, cream separator, homogenizer, all new equipment. Hannon Dairy Co., 532 Vienna Ave., Niles, Ohio. 2-M

FOR SALE — Large quantity of clean, used 48 mm. economy round quart bottles at 2 cents each f.o.b. N.Y.C. Also good serviceable used standard round quart milk bottle cases at 25 cents each f.o.b. N.Y.C. Manchester Cream Co., 421 E. 174th St., N. Y. 57, N. Y. 2-M-2

FOR SALE — Three 100 gallon Creamery Package Round Stainless Steel Pasteurizers; Four 200 gallon Wright Stainless Steel Lined Pasteurizers, paddle agitation; also 300 and 400 gallon Cherry-Burrell Stainless Steel Spray Vat Pasteurizers. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 2-M

FOR SALE — 8 c.p.m. Rice and Adams Straightaway Can Washer; 4 c.p.m. Oakes and Burger Rotary Can Washer; practically new 1000 lb. single compartment stainless weigh can with 2 - 10" air operated valves; 800 gal. Manton Gaulin CGC Homogenizer; 4 Valve Milwaukee Hand Filler and Capper; 1½" I. T. Coolers, 16 tube 12 feet long and 10 tube 10 feet long; 1000 lb. Toledo Scale; 1000 lb. single compartment stainless weigh can 14" valve and 200 gal. stainless receiving vat to match. Port Muttay Dairy Company, Irvington, N. J. 2-M

WANTED — EQUIPMENT

WANTED — Atmospheric double drum dryer. Capacity at least 3,000 pounds raw product per hour. Box 379, care this publication. 2-M

BUSINESS OPPORTUNITY

Good Dairy in Western Colorado, yearly sales $155,000.00. Wholesale and Retail

BUSINESS OPPORTUNITY

Routes. Will sell business and equipment and lease building or will sell all. Box 956, Grand Junction, Colorado. 2-M

FOR SALE — MISCELLANEOUS

FOR SALE—REFRIGERATED EQUIPMENT. Sell more milk with Display Milk Cabinets; Milk Bottle Storage Coolers; Beverage Coolers; Store Display Refrigerators; Milk Service Crate Storage Cabinets; Under-Counter Cabinets; On-the-Counter Display Cabinets; Display Cabinets; Display Cases; Milk Can Store and Restaurant Cabinets; Milk Pump Cabinets; Combination Refrigerator and Frozen Food Cabinets; Combination Bottle Cooler and Refrigerator Cabinets; Open-Type Milk Display Cabinets. Display More—Sell More. Powers Equipment Company, 305 York Road, Jenkintown, Pennsylvania. 2-M

FOR SALE—Chocolate Milk made with Bradway Non-Settling Chocolate Syrup and Powder is superior. Place your trial order now. BRADWAY CHOCOLATE COMPANY, New Castle, Ind. 7-M-t.f.

FOR SALE—Used milk bottle crates. Can deface old name and rebrand. Write or phone for present day inventory. Ohio Creamery Supply Co., 701 Woodland Ave., Cleveland, Ohio. 7-M-t.f.

FOR SALE—Truck lettering and trademark decals, made for your truck and store advertising. Easy to apply; uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Co., 827 So. Harvey, Oak Park, Illinois. 2-M-2

Divco Floor Mats, old style per set $6.50, 1946—1948 per set $7.25, F.O.B. Buffalo. Satisfaction guaranteed. Iroquois Mat Co., 700 Swan St., Buffalo 10, N. Y. 2-M-2

FOR SALE — Universal Cooler Model "71". Condensing Units, For 650 cu. ft. box. Self contained type, gasoline or electric powered. Adapted to Freon or Methyl Chloride. Provides temperatures from 35° for perishables, to 10° for frozen food. Ready to ship in original cases. Brand New (government surplus) while they last—we have only seven—Price f.o.b. Pueblo, Colorado $895.00. Merchandising Associates, P. O. Box 761, Pueblo, Colorado. 2-M

FOR SALE—INSULATED MILK TRUCK BODIES for farm pick-up. Write for prices and deliveries. Millington Truck Body Co., Inc., Millington, Mich., Huntington, Ind.; Sparta, Wisc. 2-M-6

POSITION WANTED

Versatile Executive, accountant, credit and office manager experienced in dairy bottling plant, ice cream mix, ice cream products. Knows sales, purchasing, departmental operation. Has extensive background with national organization. Seeks connection with progressive firm where hard work and knowhow will secure position commensurate with ability. Reasonable salary. Excellent reference. Box 374, care this publication. 2-M

POSITION WANTED—As Manager of Fluid receiving plant. Course in Dairy Production, 20 years diversified experience, quality control, field work, procurement work. Knows N. Y. City and N. J. Health Dept. regulations. Or would consider starting new plant now building and get your need milk. Married. References. Will arrange for interview. Box 382, care this publication. 2-M-2

Manager or Foreman — Ten years experience in Bottling and Manufacturing plants. Testers and bacteria licenses, familiar with Board or Health rules. Have four years as manager. Box 381, care this publication. 2-M

POSITION WANTED

POSITION WANTED — Laboratory or Plant Supervisor, B. S. degree in dairy industry, Iowa State College 1939. Nine years experience in quality control and research laboratory work. Familiar with phases of evaporated milk, market milk powdered milk, ice cream, butter, cream, and condensed milk production. Married. Age 31. Excellent Health. Immediate availability. Box 380, care this publication. 2-M

HELP WANTED

WANTED—Manager for New York City Milk Pasteurizing and Bottling plant. State experience and salary desired. Box 373, care this publication. 12-M-t-f.

SALESMAN WANTED — Real opportunity for man, age 25-35, willing to travel with a leading firm in the milk bottle closure field. Experience in dairy industry preferable but not essential. Applicants must be able to read blueprints and prepare plans for installations. Write, giving full information to Box 383, care this publication. 2-M

CITY ICE CHANGES NAME

Fifty-four Year Old City Ice & Fuel Company of Chicago Becomes City Products Corporation

WILLIAM J. SINEK, President, announced that at the Directors meeting of the company held at Chicago today, it was decided to change the name of The City Ice & Fuel Company to "CITY PRODUCTS CORPORATION", subject to stockholders authorization at the annual meeting in April.

According to Sinek, the question of recommending a new name has been under consideration by the Board for some time. The Directors, Sinek said, are of the unanimous opinion that the company's activities are now so widely diversified that the present name no longer is adequately descriptive of the business of the Company.

In 1940, the total net sales of the company amounted to approximately $25,000,000, with 1948's volume of net sales approximately $80,000,000, the increase being due in a large measure to the extensive diversification and expansion of the company's business. The company is now manufacturing, distributing and selling many varied products in large volume, and engaging in many varied activities. These diversified products and activities include ice in all forms, refrigerator car icing for the principal railroads and carlines in the United States, Canada and Mexico, brewery products, ice cream and dairy products, coal, fuel oil, refrigerators, appliances and the operation of 14 cold storage warehouses at strategic locations from Phoenix, Arizona to Jersey City, New Jersey.

The company's many products are manufactured, distributed and sold, and its many activities conducted in 300 or more cities and communities located throughout the United States, Canada and Mexico.

PROTEST PRICE CUT

Trenton, January 7 — New Jersey's dairymen were stirring restlessly under the sting of their coming 7.5 percent pay cut as the effects of the ordered reduction of prices to producers began to sink in.

The order issued by Milk Director Arthur F. Foran cuts producer prices from $6.06 per hundred pounds (13.2 cents per quart) to $5.60 (12.2 cents per quart) as of January 20.

Thomas L. Lawrence, general manager of United Milk Producers said that the ground-swell among the group's 2500 dairymen-members, more than half of the state's producers, was growing stronger and more bitter.

They Dislike Most —

Lawrence said the things ranking dairymen most are these —

1. That the entire reduction in retail costs has been borne by the producer. Milk dealers have retained their full margins on sale price.

2. That Governor Driscoll, who started the milk melee by ending retail minimum prices, erred in believing producer prices could remain at a fair level without some support mechanism all along the price line.

3. That arbitrary actions were taken in spite of testimony by State College economists and State Agricultural Department statisticians showing that the $6.06 price did not return production costs.

"The current ill-advised moves made by the Governor, directly and indirectly, are threatening to upset the stability of New Jersey's milk industry. That stability has been achieved after 15 years of hard work, compromise, and give-and take in good spirit. To kick over the traces at a time when the dairyman is already pinched between rising costs for the things he must buy and the reduction in his income, is not easy to take", Lawrence said.

The UMP manager said dairymen had expected the price of $6.06 per hundred pounds would remain stable through the first three months of 1949 and had made plans accordingly.

Blame the Governor

As dairymen see the picture, according to Lawrence, the blame lies squarely at the door of the Governor. His elimination of retail resale minimums opened the door to a small-scale milk price war with the dairies buying out-of-state milk, shaving prices on the basis of their cheaper supply. Milk dealers buying within the state then were forced to meet competitive prices, either by cutting the price to the producer or replacing their New Jersey milk producers with milk from out-of-state sources.

Index of Advertisers

A

PAGE

American Dairy Association 13

B

Beaverite Products, Inc. 67
Buflovak Division of Blaw-Knox Co. 37
Buhl Manufacturing Company 67

C

Cherry-Burrell Corp. 11, 17, 33
C. I. T. Corporation 5
Continental Can Co., Inc. 41
Creamery Package Mfg. Co. ..... Back Cover
Crown Cork & Seal Co. 18-19

D

Damrow Bros. Co. 9
De Laval Separator Co., The ..... Inside Front Cover

E

Erickson Co., Inc., C. E. 57

F

Forbes Company, Benjamin, P. 73

G

Girton Mfg. Co. 25

K

Kendall-Lamar Corporation 35
King Zeero Co., The 61
Kraft Foods Co. ..... Inside Back Cover
Kurly-Kate Corp. 69

L

Layne & Bowler, Inc. 49

M

Marschall Dairy Laboratory, Inc. 73
Merit Manufacturing Co. 72

O

Overton Machine Co. 72

P

Pittsburgh Plate Glass Company (Columbia Chemical Division) 65
Pure-Pak Division, Ex-Cell-O Corp. 20

R

Reeve & Mitchell (Division of Schwartz Mfg. Co.) 55
Rogers Co., C. E. 65

S

Smith-Lee Co., Inc. 15
Sharples Corporation, The 45
Solvay Sales Division (Allied Chemical & Dye Corporation) 29
Stainless & Steel Products Co. 59
Steelcote Mfg. Co. 53
Stoelting Bros. Co. 31
Superior Metal Products Co. 63

T

Thatcher Mfg. Co. 7
Thomson & Sons, L. C. 71

Cherry - Burrell Appoints

A. H. BARBER

Mr. Carl A. Wood, vice - president in charge of sales for the Cherry - Burrell Corporation announces the appointment of Mr. A. H. Barber, Jr. as Chicago sales branch manager. Mr. Barber succeeds Mr. T. K. Johansen, who will act as consultant to the Chicago manager.

This transfer of responsibility will enable Mr. Johansen to serve Cherry-Burrell in a manner which will allow him to pay little attention to working hours, and at the same time make a real contribution from his long service and experience, according to Mr. Woods.

Mr. Barber has been Assistant Branch Manager and Manager of Sales Engineering at Chicago for several years. A graduate of Cornell University, he has accumulated extensive experience in farm management, milk production and sales engineering at C-B branches in Cleveland, New York and Cincinnati.

●

More Milk Per Cow in '49

A goal of 120 billion pounds of milk for 1949, established in the face of dwindling cow numbers in the U. S., will require the Nation's dairy farmers to boost the average milk production of their cows to an all-time high this year, U. S. Department of Agriculture officials said today. Cow numbers are now the lowest since 1930.

The average production of the 23,200,000 cows milked on farms in 1948 was about 5,020 pounds. Even if the number of cows remains the same, average production will have to be increased to about 5,170, or an increase of 150 pounds of milk per cow, if the 1949 production goal is to be met. In many herds such an increase could easily be accomplished by better feeding.

Since grain feeds are now more plentiful and cheaper in relation to milk prices than they have been for some time, heavier grain feeding is one of the measures recommended by the Bureau of Dairy Industry. On the average, less than a half pound of extra grain per cow per day would be needed to get the extra 150 pounds of milk, according to the dairy specialists.

While grain can now be fed somewhat more liberally, dairy farmers are also urged to give attention to the production of high-quality roughage. Good hay, silage, and pasturage are always essential for the most profitable milk production. Better methods of handling the pastures and hay crops would increase both the yield and the feeding value of the forage, the dairy specialists say.

Cooperative experiments by the Bureau of Dairy Industry and the Bureau of Plant Industry, Soils, and Agricultural Engineering, at Beltsville, Md., have shown that the renovation of permanent pastures by surface tillage and re-seeding, combined with liberal manuring and fertilizing will greatly increase the yield of the pastures and provide additional grazing during mid-season when it is needed most.

XUM

There's more money in chocolate-flavored dairy drinks made the easy Kraft way!

DELICIOUS FLAVOR, UNIFORM COLOR, FROM TOP TO BOTTOM

ECONOMICAL NEW POWDER CONTAINS A CARRAGEENIN-BASED STABILIZER

It will not "settle out"!

- ***FINER FLAVOR*** . . . a deep-down delicious "chocolaty" taste that you'll find ideal as a base for your formula. Kraft Stabilized Chocolate-Flavored Powder is a superb blend of top-grade, finely-ground cocoa and sucrose . . . brought to flavor perfection by a dash of salt and vanillin.
- ***LASTING SUSPENSION*** . . . this finer Kraft product contains a carrageenin-based stabilizer. *It will not "settle out"!* Color distribution is even, uniform. There are no color layers or "marbling" to destroy eye appeal.
- ***LOW VISCOSITY*** . . . drinks made with Kraft Powder have nearly the same viscosity as fluid milk! They pour out smoothly, leave on the tongue no filmy, sweetish after-taste to destroy the appetite for "seconds."
- ***EASY TO USE*** . . . no mess, no bother. No sticky syrup to scrape from the sides of a jug or tin. You can get the last spoonful of powder from its container. Quickly and easily soluble.
- ***ECONOMICAL*** . . . the price is amazingly low. Convenience and ease in handling save time and money in manufacturing. Always uniform, Kraft Stabilized Chocolate-Flavored Powder never fails, when properly used, to produce a delightful, fast-selling chocolate-flavored drink.

Find out more about this amazing product. Call or write the Kraft branch in your area today. Once you try it, you'll agree that Kraft Stabilized Chocolate-Flavored Powder makes a better dairy drink . . . easier. Kraft Foods Company, Department AM-6, 500 Peshtigo Court, Chicago 90, Illinois. Branches in all principal cities.

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for making chocolate-flavored milk drinks

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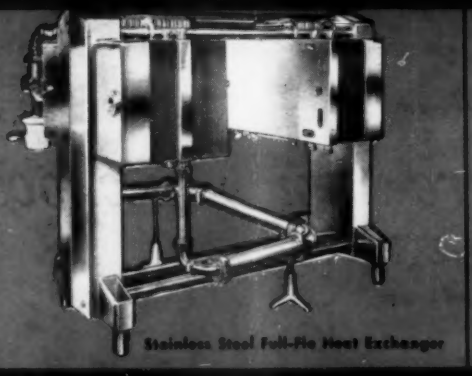
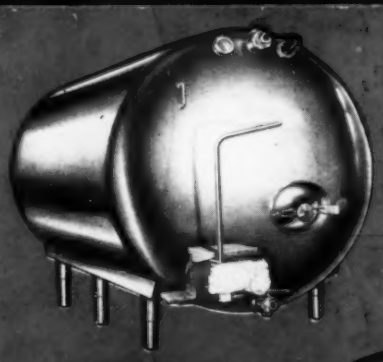


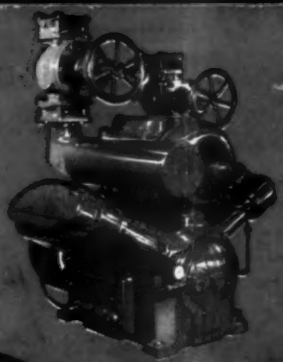
Stainless Steel Full-Pie Heat Exchanger

Series 40 Multi-Process Tank

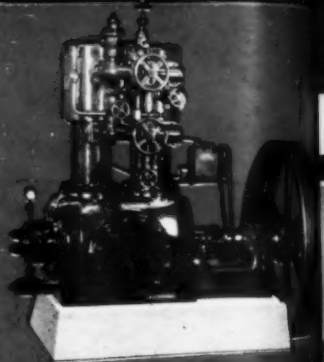
HELP CUT COSTS WITH



Cylindrical Storage Tank

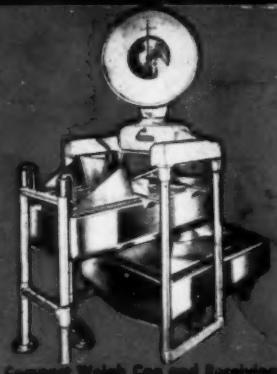


Multi-Cylinder Ammonia Compressors



Regular Ammonia Compressors

NEW EQUIPMENT..



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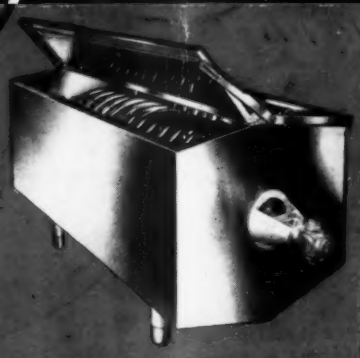
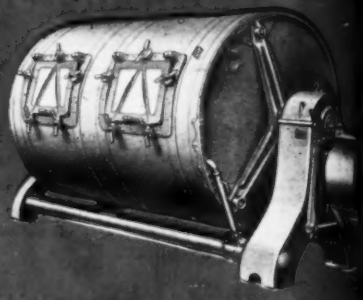


Wizard Coil Vat with SS Coil and Sanitary Seal



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